MHC-EX6BR/EX8BR

MANUAL DE SERVIÇO

Brazilian Model

Ver. 1.1 10.2010

MHC-EX6

MHC-EX8

• MHC-EX6BR/EX8BR são compostos de conforme modelos a baixo:

NOME DO MODELO DO COMPONENTE

	MHC-EX6BR	MHC-EX8BR
RECEIVER DE DISCO COMPACTO	HCD-EX6	HCD-EX8
CAIXA ACÚSTICA FRONTAL	SS-EC69	SS-EC79

ESPECIFICAÇÕES

Geral

Requisitos de alimentação
AC 127 V ou 220 V , 50/60 Hz,
ajustável com seletor de tensão
Consumo de energia
MHC-EX6BR: 110W (0.5 W no modo de economia)
MHC-EX8BR: 170 W (0.5 W no modo de economia)
Dimensões (LxAxP) (excluindo caixas acústicas)
Aprox. 200 mm × 306 mm × 350 mm
Peso (excluindo caixas acústicas)
MHC-EX6BR: Aprox. 5.6 kg
MHC-EX8BR: Aprox. 6.6 kg

Acessórios fornecidos: Controle remoto (1),
Pilhas tipo AA (2), Antena loop de AM/
Antena monofi lar de FM (1), Pes de
proteçãoo para caixas acústicas (8)

Projeto e especifi cações técnicas sujeitos a alteração sem prévio aviso.

ACESSÓRIOS

Ref. No.	Part No.	Description	Remark
	1-754-399-11	ANTENA, LOOP (FM /AM loop antena)	
	2-159-896-01	PÉ DE APOIO (8) CAIXA ACÚSTICA	
	4-185-062-11	MANUAL DE INSTRUÇÕES (MHC-EX6/EX8)	
	1-528-399-11	PILHA PEQUENA (2)	
	Y-8285-815-E	RM-AMU006 (Controle remoto)	

SISTEMA COMPACTO DE SOM

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HCD-EX6/EX8

MANUAL DE SERVIÇO

Brazilian Model

Ver. 1.0 07.2010

Foto: HCD-EX8

- HCD-EX6 é o amplificador, USB, reprodutor CD e Sintonizador do MHC-EX6.
- HCD-EX8 é o amplificador, USB, reprodutor CD e Sintonizador do MHC-EX8.

Seção CD	Modelo que Utiliza Mecanismo Similar	Novo
	Tipo de Mecanismo	CDM88CL-D1BD74UR
	Nome da Unidade Ótica	DA11MMVGP

ESPECIFICAÇÕES

Seção Amplificador

Os valores a seguir foram mensurados a 127 ou 220 V CA, 60Hz

HCD-EX6

Potência de saída RMS:
140 W (70 W por canal x2, a 6 Ω, 1 kHz, 10% THD)

HCD-EX8

Potência de sa;ida RMS:
Canal de baixa frequência
300 W (150W por canal x2, a 8 Ω, 1 kHz, 10% THD)
Canal de alta frequência
300 W (150W por canal x2, a 8 Ω, 1 kHz, 1% THD)

Entradas

PC IN (minitomada estéreo):
Sensibilidade de 800 mV, impedância de 22 kiloohmus

Saídas

PHONES (minitomada estéreo):
Aceita fones de ouvido com uma impedância de 8 Ω ou mais
SPEAKERS: impedância
HCD-EX8: 8Ω
HCD-EX6: 8Ω

Seção USB

Taxa de bits compatíveis:
MP3 (MPEG 1 Audio Layer-3): 32 kbps – 320 kbps, VBR
WMA: 48 kbps – 192 kbps
AAC: 48 kbps – 320 kbps

Frequência de amostragem:
MP3 (MPEG 1 Audio Layer-3): 32/44.1/48 kHz
WMA: 44.1 kHz
AAC: 44.1 kHz
Porta (USB):
Maximum
Corrente máxima: 500 mA

Seção do reprodutor de CD

Sistema:
Sistema de áudio digital e disco compacto
Propriedade do diodo Laser
Duração da emissão: Contínua
Saída laser*: Inferior an 44.6μW
*Valor da saída medido a uma distância de 200 mm, a partir da superfície da lente da unidade ótica com 7 mm de abertura.

Resposta de frequência: 20 Hz – 20 kHz
Relação sinal-ruído: Mais de 90 dB
Faixa dinâmica: Mais de 88 dB

Seção de sintonizador

FM estéreo, sintonizador super-heteródino de FM/AM
Antena:
Antena monofilar de FM
Antena loop de AM

Sintonizador de FM:
Faixa de sintonização:
87.5 MHz – 108.0 MHz (passos de 100 kHz)
Frequência intermediária: 225 kHz
Sintonizador de AM:
Faixa de sintonização
530 kHz – 1,710 kHz (passos de10 kHz)
Frequência intermediária: 53 kHz

– Continua na próxima página –

COMPACT DISC RECEIVER

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Geral

Requisitos de alimantação
127 ou 220 V AC, 50/60 Hz, ajustável com seletor de tensão

Consumo de energia
HCD-EX6: 110 W
(0.5 W no modo de economia)
HCD-EX8: 170 W
(0.5 W no modo de economia)

Dimensões (LxAxP) (excluindo caixas acústicas)
Aprox. 200 mm × 306 mm × 350 mm

Peso (excluindo caixas acústicas)
HCD-EX6: Aprox. 5.6 kg
HCD-EX8: Approx. 6.6 kg

Projeto e especificações técnicas sujeitos à alteração sem prévio aviso.

NOTES ON CHIP COMPONENT REPLACEMENT

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

FLEXIBLE CIRCUIT BOARD REPAIRING

- Keep the temperature of soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

This appliance is classified as a CLASS 1 LASER product. This marking is located on the rear exterior.

ATENÇÃO COM OS COMPONENTES DE SEGURANÇA!!

OS COMPONENTES IDENTIFICADOS COM A MARCA ⚠ NOS DIAGRAMAS ESQUEMÁTICOS E NA LISTA DE PEÇAS SÃO CRÍTICOS PARA A SEGURANÇA. SOMENTE OS SUBSTITUA POR PEÇAS NUMERICAMENTE IDENTIFICADAS NESSE MANUAL OU EM SUPLEMENTOS PUBLICADOS PELA SONY.

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SEÇÃO 1
NOTAS DE SERVIÇOS

NOTAS SOBRE O MANUSEIO DA BLOCO DE UNIDADE ÓTICA OU BASE DA UNIDADE

O diodo laser da unidade optica e sensÍvel a descargas eletroestáticas podendo vir a ser danificado por descargas causadas por roupas ou mesmo pelo corpo humano. Durante o reparo tenha cuidado para não causar danos a unidade, devido a cargas eletroestáticas e siga corretamente os procedimentos descritos nesse manual para a execução de reparos e troca de componentes.
As placas de circuito impresso podem ser facilmente danificadas. Tenha cuidado ao manusea-las.

NOTAS SOBRE A EMISSÃO DO DIODO LASER

O feixe laser nesse modelo é concentrado e deve ser focado na superficie reflexiva do disco, pela lente objetiva da unidade optica. Quando estiver observando a emissão do diodo laser, tome o cuidado de estar no minimo a 30 cm da lente objetiva.

SOLDA SEM CHUMBO

Placas que exigem o uso de solda sem chumbo são impressas com a marca LF (lead free) indicando que a solda não contem chumbo.
(**Atençãα** Algumas placas de circuito impresso podem não ter essa marca devido ao seu tamanho reduzido.)

: IDENTIFICAÇÃO DA SOLDA SEM CHUMBO

A solda livre de chumbo tem as seguintes caracteristicas:

- Derrete a uma temperatura 40 °C maior que a solda comum.

  Ferros de solda comuns podem ser usados mas a ponta tem que ser aplicada sobre a solda por um tempo maior.
  Ferros de solda com ajuste de temperatura devem ser ajustados no valor de 350 °C.
  Atenção: A impressao da placa (trilhas de cobre) pode se soltar se a ponta permanecer por muito tempo. Tenha cuidado!
- É mais viscosa
  A solda livre de chumbo é mais viscosa (flui com menor facilidade) que a solda comum, portanto tenha cuidado com as pontes de solda, especialmente entre os pinos de IC's.
- Pode ser utilizada com solda comum
  E melhor usar apenas solda sem chumbo, mas este tipo também pode ser adicionado a solda comum.

NATA SOBRE REPARO DO IC102 DA PLACA DMB19

IC102 da placa DMB19 não pode ser substituído individualmente. Quando esta peça é com defeito, substitua a placa montada.

DESTRAVANDO A BANDEJA DO DISCO

Esta função serve para evitar o furto de discos de aparelhos em demosntração em lojas.

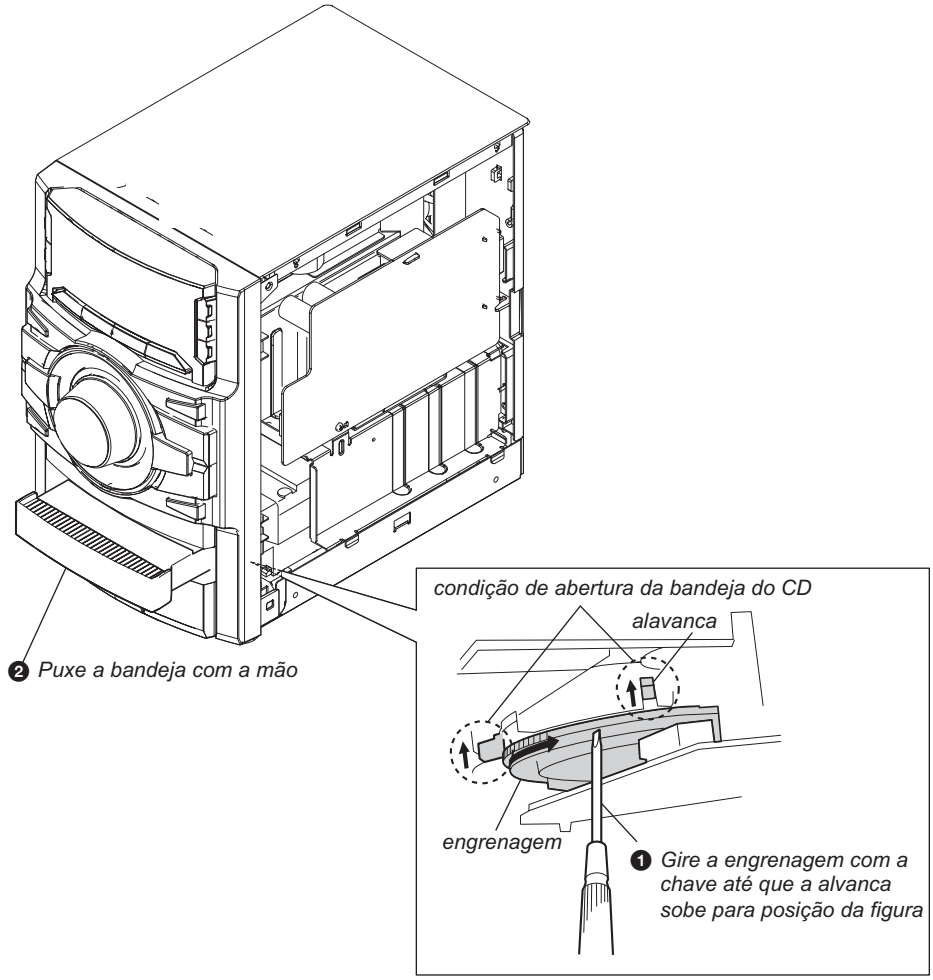
Procedimento para Destravar:

1. Pressione a tecla [I/⏻ STANDBY] para ligar o aparelho.
2. Pressione a tecla [CD] para selecionar função CD.
3. Enquanto pressiona tecla [■] , pressione [⏏ OPEN/CLOSE] (por mais de 5 segundos).
4. A menssagem “UNLOCKED” aparecera e a bandeja estará liberada

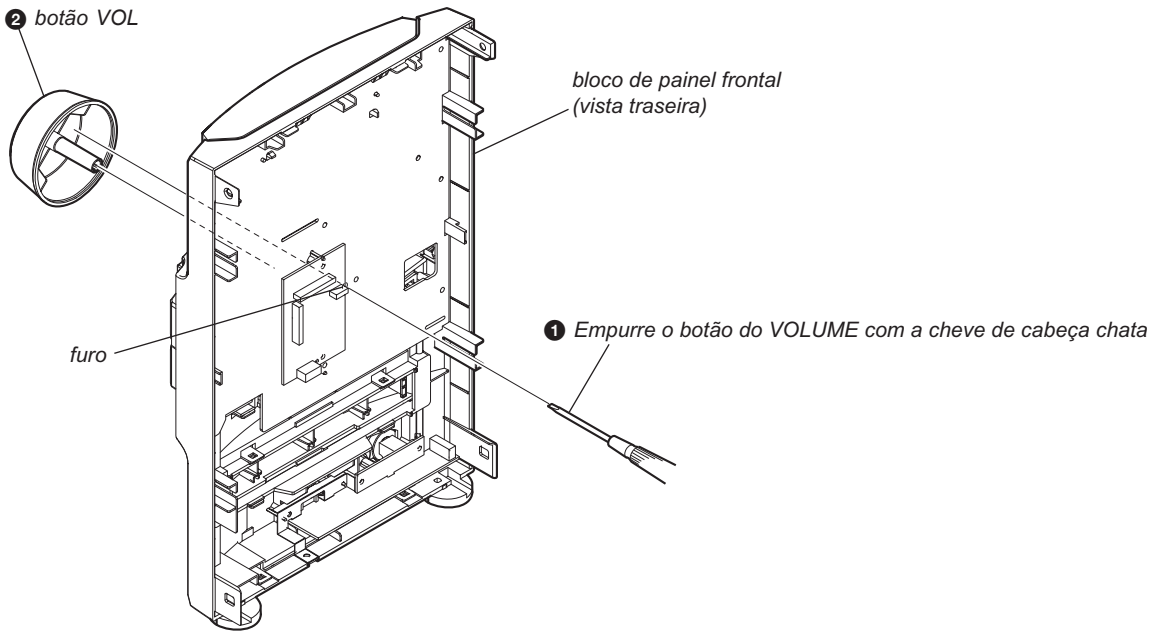
Nota: Quando “LOCKED” é exibido, a bandeja não será liberada ao desligar o aparelho através do botão [I/⏻ STANDBY].

COMO ABRIR A BANDEJA QUANDO APARELHO É DESLIGADO

Nota: Favor retirar a tampa lateral (R) do aparelho e consulte item DESMONTAGEM.

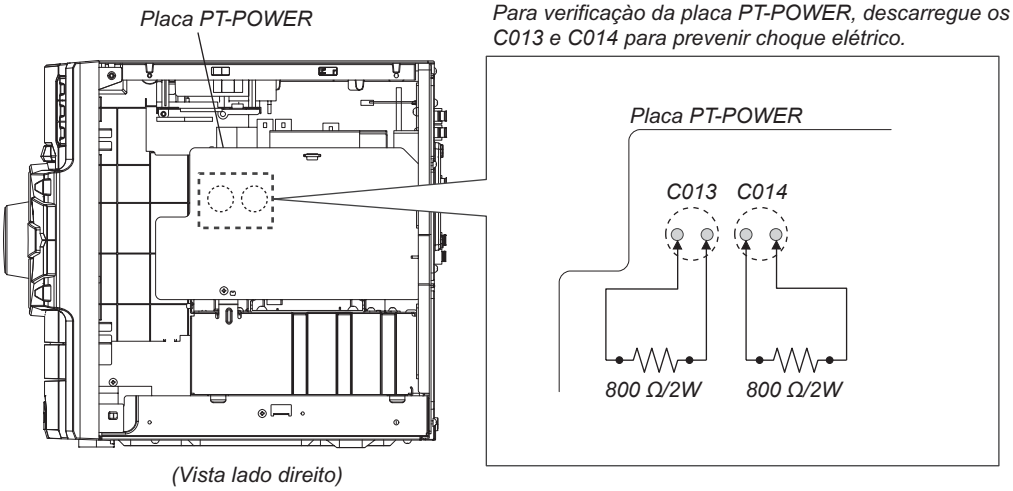


COMO RETIRAR BOTÃO (VOL)

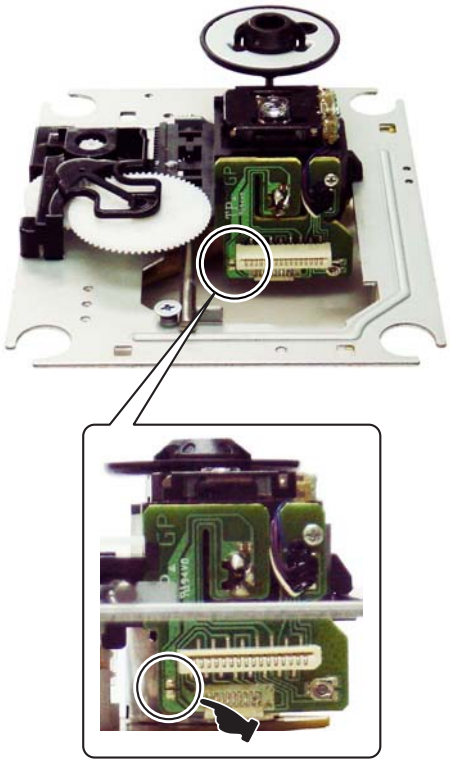


DESCARREGAMENTO DO CAPACITOR PARA PREVENIR CHOQUE ELÉTRICO

Nota: Favor retirar a tampa lateral (R) do aparelho e consulte item DESMONTAGEM.



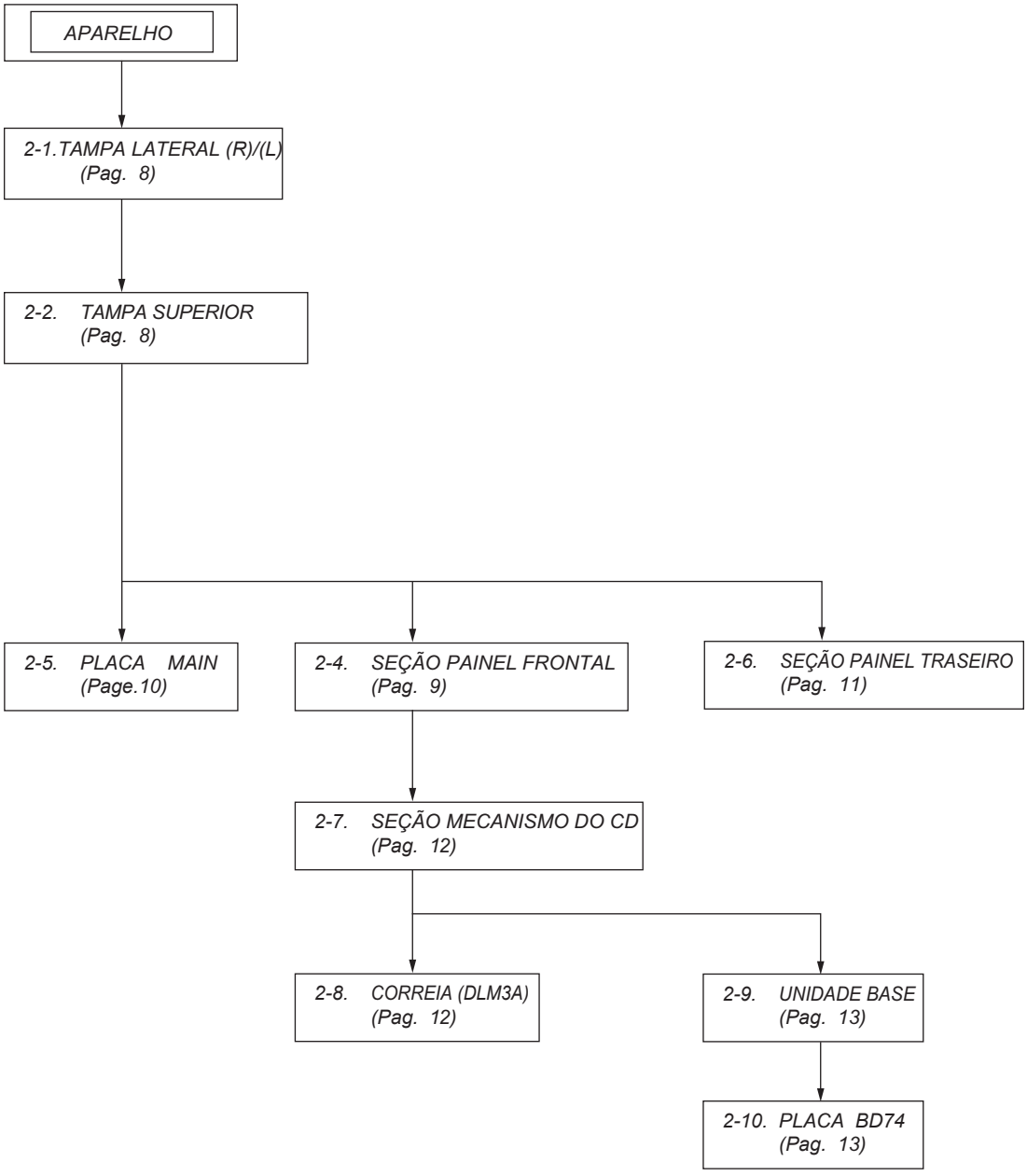
PRECAUÇÃO PARA QUANDO SUBSTITUIR UNIDADE ÓTICA NOVA
PRECAUÇÃP PARA ANTES DE DESSOLDAR PONTO DE CURTO
DA PREVENÇÃO ELETROESTÁTICA



Quando substituir uma unidade ótica, conecte primeiro o cabo flat antes de dessoldar ponto de curto anti-estática da placa de unidade ótica.

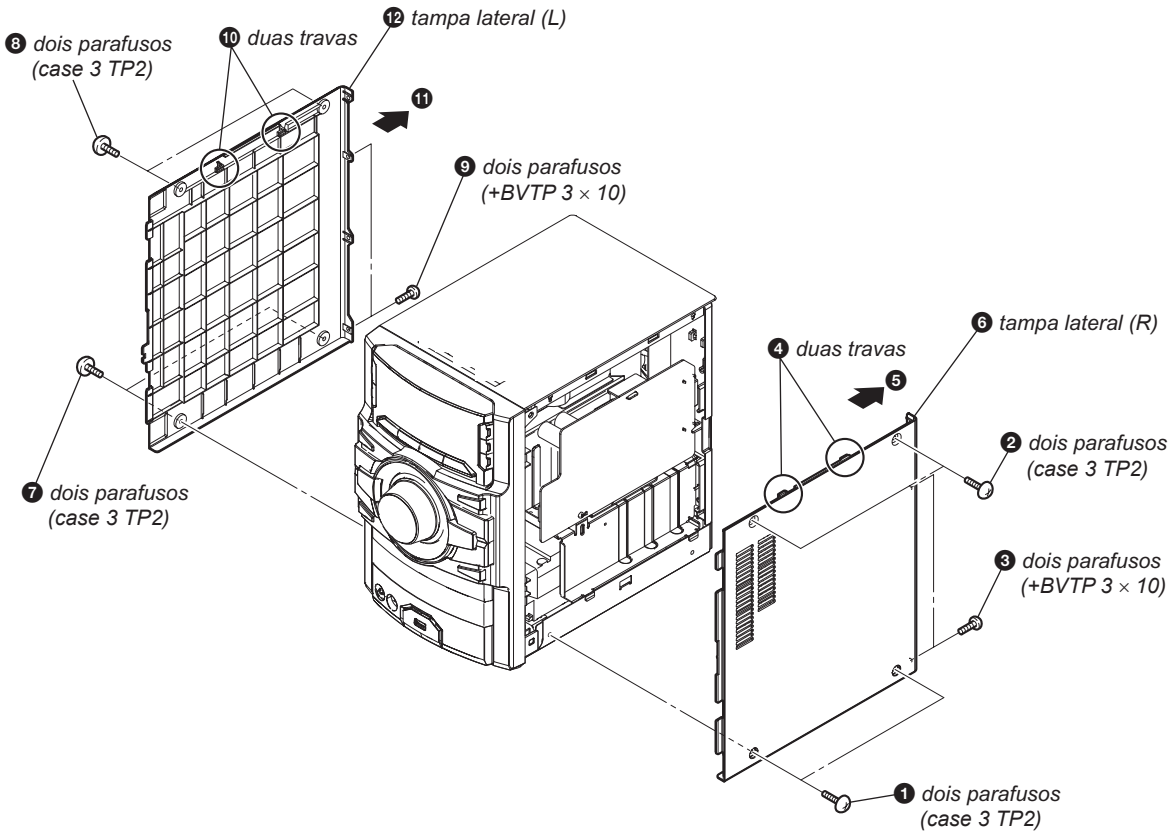
SEÇÃO 2
DESMONTAGEM

- Este aparelho pode ser desmontado seguindo a ordem numerica dada a seguir.

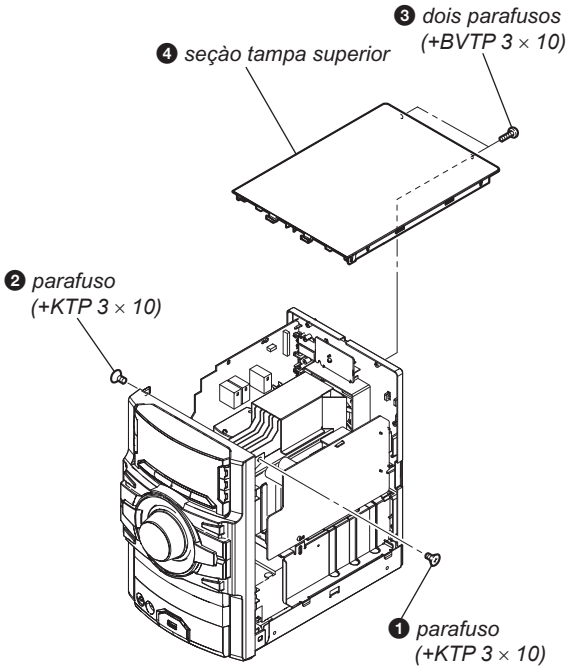


Nota: Siga o procedimento de desmontagem na ordem numerica dada.

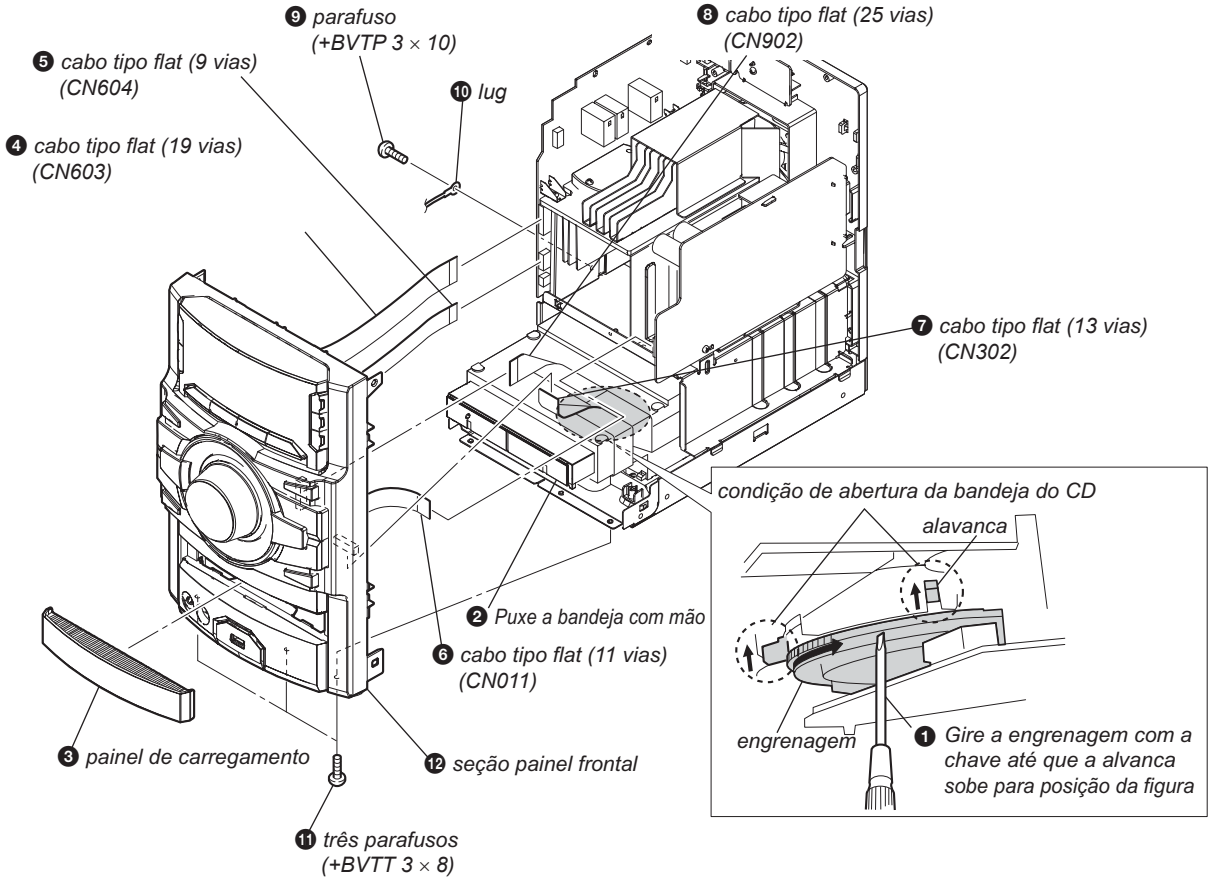
2-1. TAMPA LATERAL (R)/(L)



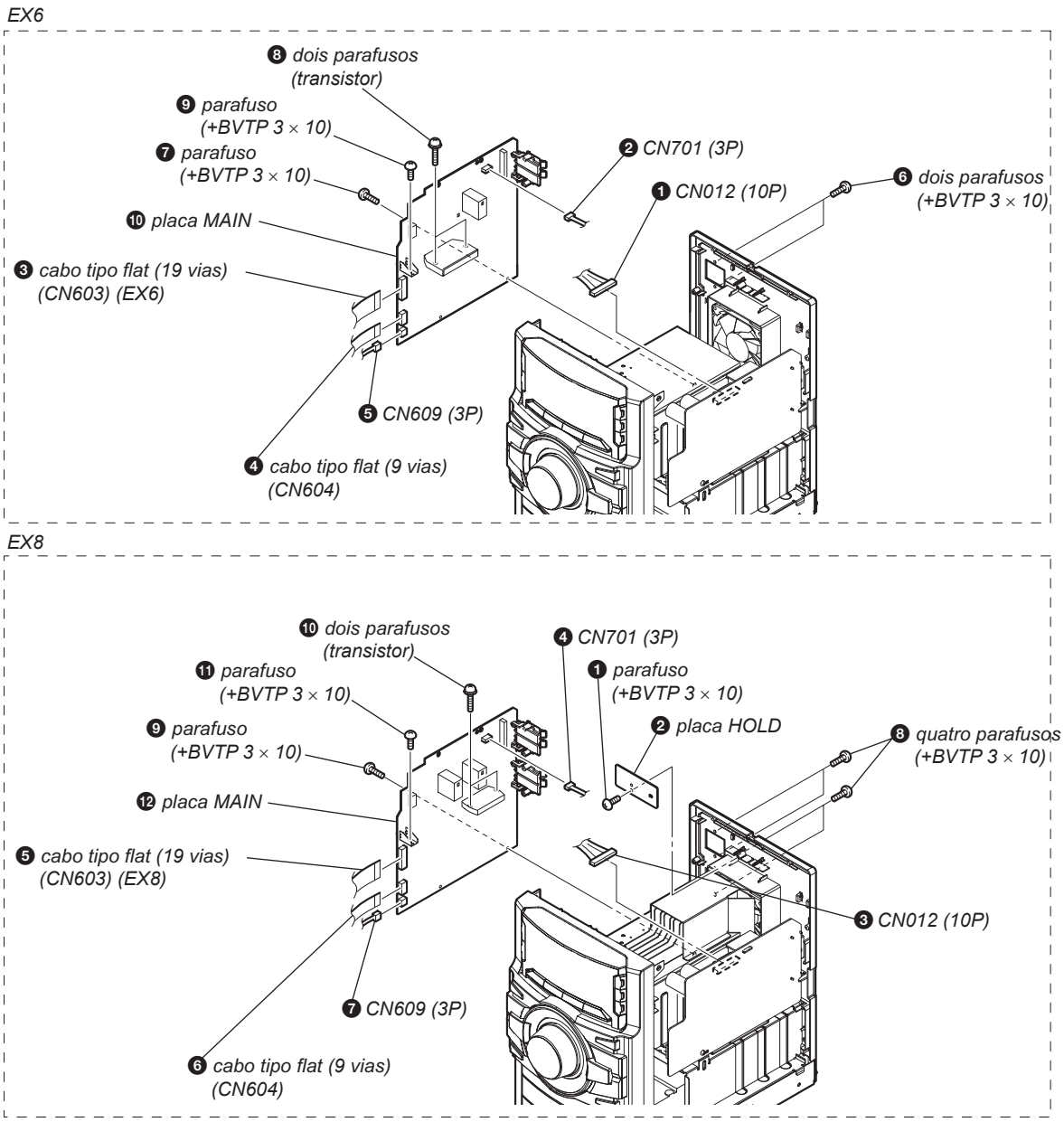
2-2. SEÇÃO TAMPA SUPERIOR



2-3. SEÇÃO PAINEL FRONTAL

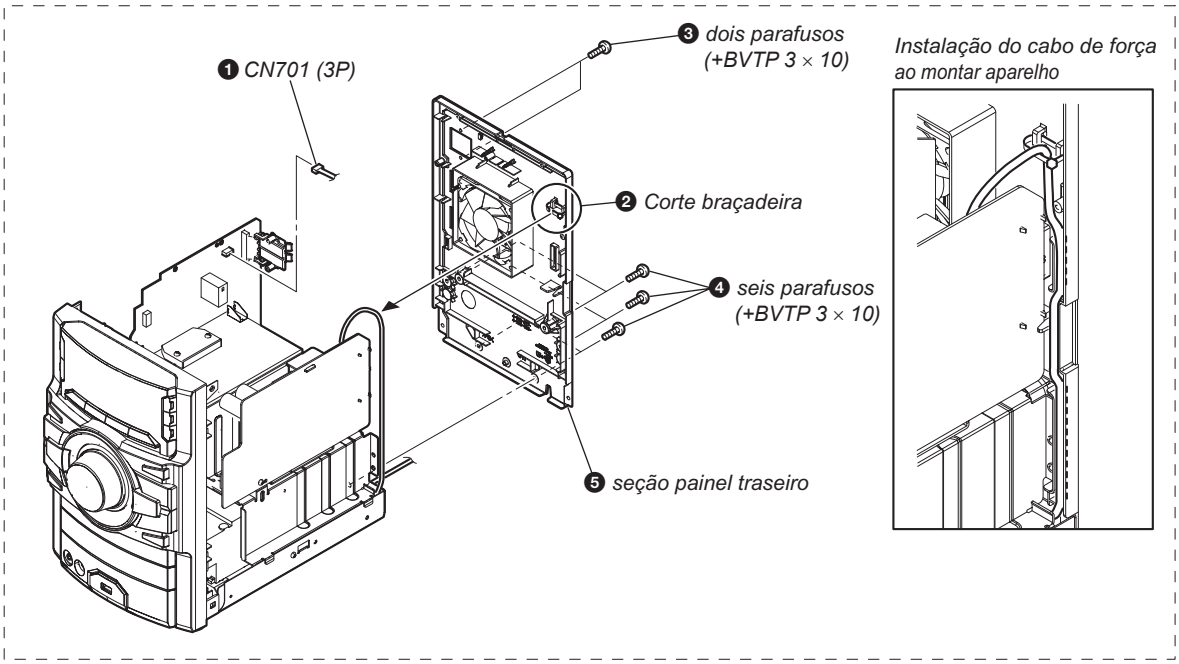


2-4. PLACA PRINCIPAL (MAIN)

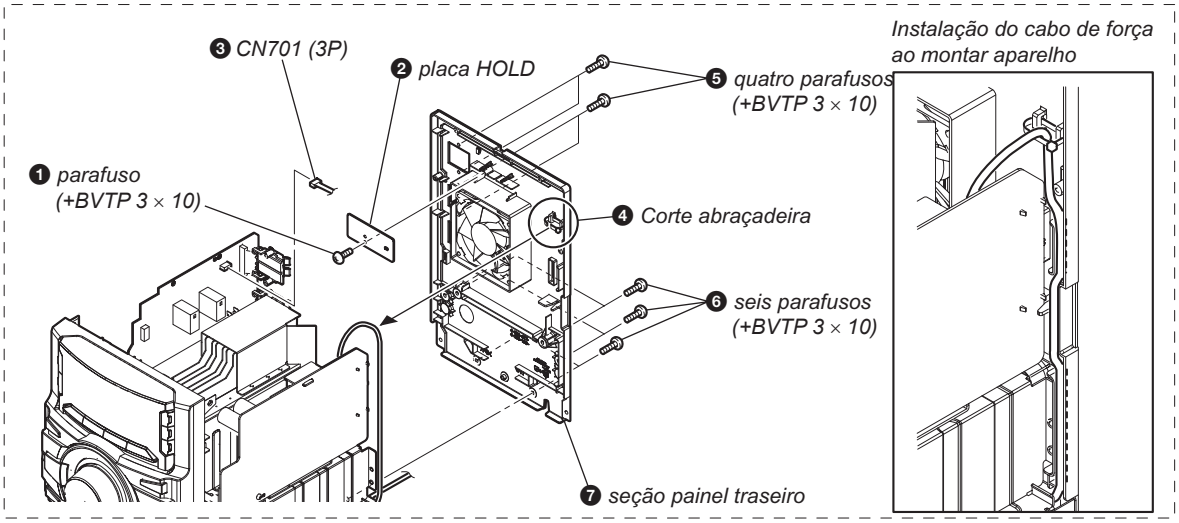


2-5. SEÇÃO PAINEL TRASEIRO

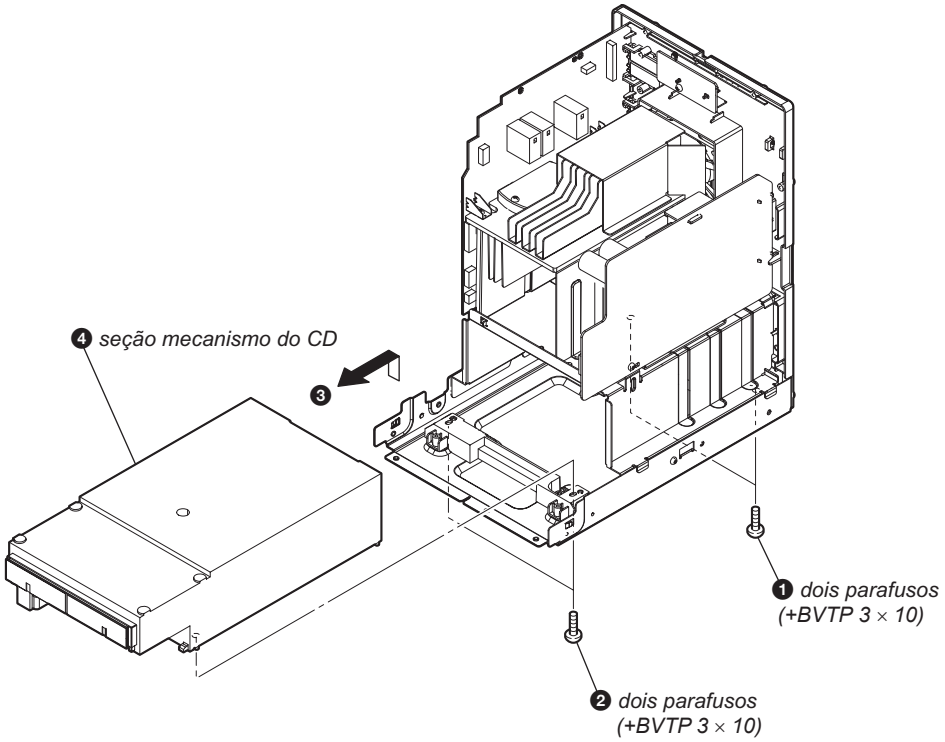
EX6



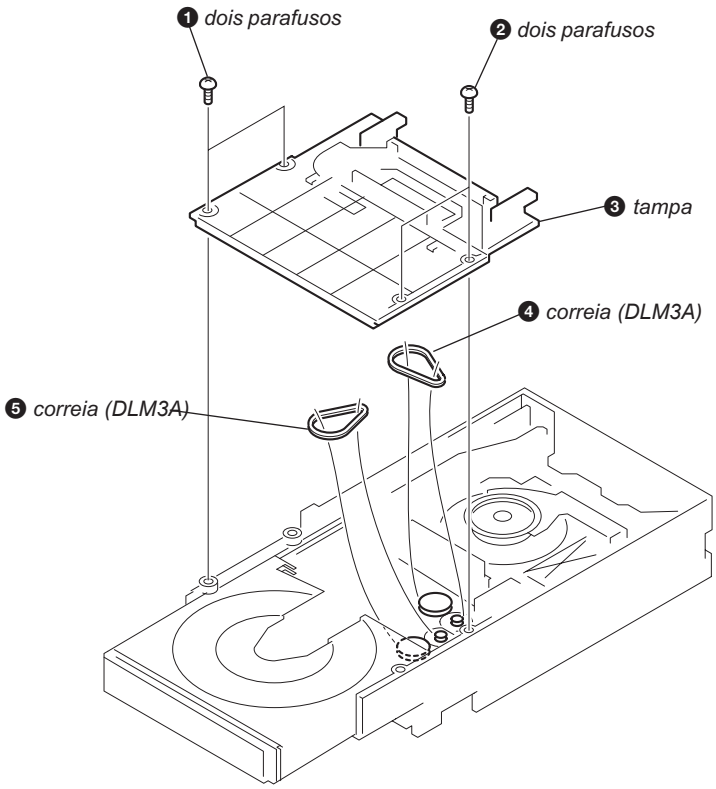
EX8



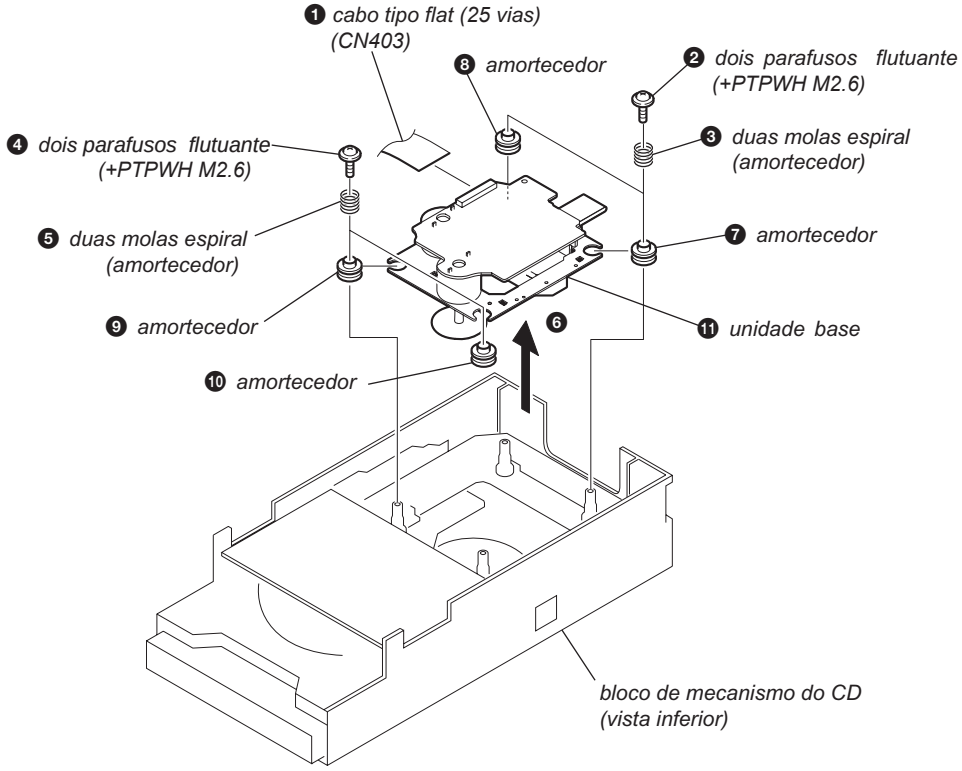
2-6. SEÇÃO MECANISMO DO CD



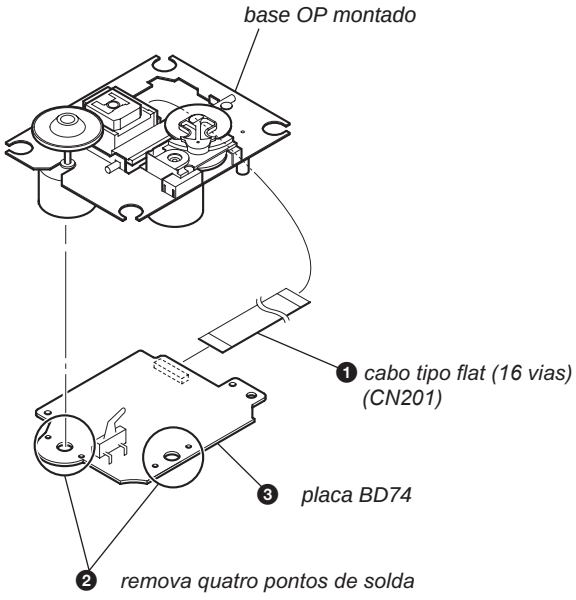
2-7. CORREIA (DLM3A)



2-8. UNIDADE BASE



2-9. PLACA BD74



SEÇÃO 3
MODO DE TESTE

COLD RESET
The cold reset clears all data including preset data stored in the memory to initial conditions. Execute this mode when returning the set to the customer.

Procedimento:

1. In the standby status, press the [I/⏻] button to turn the power on.
2. Press three buttons of [■], [FUNCTION] and [I/⏻] simultaneously.
3. When “RESET” appears, the set enters standby status.

MODO DE TESTE DO PAINEL
Para Entrar no Modo de Teste do Painel

Procedimento:

1. In the standby status, press the [I/⏻] button to turn the power on.
2. Press three buttons of [DISPLAY], [■] and [OPTIONS] simultaneously.
3. When the panel test mode is activated, all LEDs and segments of the liquid crystal display panel are all turned on.

Verificação da Versão
Procedimento:

1. In the panel test mode (all LEDs and segments of the liquid crystal display panel are turned on), press the [FUNCTION] button.
2. On the liquid crystal display panel, date and version are displayed “xxxxVxxx”.
3. From this status, press the [►II] button, and the destination and model name are displayed.
4. To release from this mode, press three buttons of [DISPLAY], [■] and [OPTIONS] simultaneously.

Modo de Teste da Chave (Key)
Procedimento:

1. In the panel test mode (all LEDs and segments of the liquid crystal display panel are turned on), press the [■] button.
2. The message “KEY0 0 0” displayed. Whenever any buttons are pressed and the [VOLUME] control is turned, the value is changed.
3. To release from this mode, press three buttons of [DISPLAY], [■] and [OPTIONS] simultaneously.

MODO DE CANCELAMENTO DA REPETIÇÃO 5 VEZES DO CD
Number of repeats for CD playback is 5 times when the repeat mode is “REPEAT”. This mode enables CD to repeat playback for limitless times.

Procedimento:

1. Press the [I/⏻] button to turn the power on.
2. Press the [FUNCTION] button to select CD function.
3. Press three buttons of [DISPLAY], [■] and [TUNING + ►► ⊳⊳I] simultaneously.
4. It enters the CD repeat 5 limit cancel mode and displays “NO LIMIT”.
5. To release this mode, press the [I/⏻] button to turn the power off.

TRAVAMENTO DA BANDEJA DO CD
This mode is for the antitheft of CD disc in shop. (not for transport)

Procedimento:

1. Press the [I/⏻] button to turn the power on.
2. Press the [FUNCTION] button to select CD function.
3. Insert a disc.
4. While pressing the [■] button, press the [⏏] button for more 5 seconds.
5. The message “LOCKED” is displayed and the disc tray is locked. (Even if releasing from this mode, the disc tray is still locked)
6. If press the [⏏] button to eject the disc, the message “LOCKED” is displayed and can not eject the disc.
7. To release this lock, while pressing the [■] button, press the [⏏] button for 5 seconds again.
8. The message “UNLOCKED” is displayed and the disc tray is unlocked.

GERENCIAMENTO DA ALIMENTAÇÃO DO CD
This mode is for switch the CD power supply on/off. Even if this state pulls out AC plug, it is held.

Procedimento:

1. Press the [I/⏻] button to turn the power on.
2. Press the [FUNCTION] button to select CD function.
3. Press the [I/⏻] button again to turn the power off (standby).
4. After pressing the [DISPLAY] button, while pressing the [■] button, press the [I/⏻] button.
5. It turns power on and display “CD/USB”, then display “PWR ON” or “PWR OFF”.

ALTERAÇÃO DO INTERVALO DE SINTONIA DO AM
The AM tuning interval can be changed over 9 kHz or 10 kHz.

Procedimento:

1. Press the [I/⏻] button to turn the power on.
2. Press the [FUNCTION] button to select TUNER AM function.
3. Press the [I/⏻] button again to turn the power off (standby).
4. After pressing the [DISPLAY] button, while pressing the [TUNING + ►► ⊳⊳I] button, press the [I/⏻] button.
5. It turns power on and display “9k STEP” or “10k STEP”, and thus the tuning interval is changed over.

MODO DE TRANSPORTE (CD)
This mode can run the CD sled motor optionally. Use this mode, for instance, when cleaning the optical pick-up.

Procedimento:

1. Press the [I/⏻] button to turn the power on.
2. Confirm there is no disc in all trays.
3. Press the [FUNCTION] button to select CD function.
4. Press two buttons of [►II] and [I/⏻] simultaneously.
5. Set to the CD ship mode (chucking on).
6. After blink “STANDBY”, “LOCK” is displayed, disconnect the AC plug.

MODO DE TRANSPORTE(CD) E COLD RESET
Procedimento:

1. Press the [I/⏻] button to turn the power on.
2. Confirm there is no disc in all trays.
3. Press the [FUNCTION] button to select CD function.
4. Press three buttons of [CD], [– TUNING I◄◄ ◄◄] and [I/⏻] simultaneously.
5. After blink “STANDBY”, “RESET” is displayed, disconnect the AC plug.

MODO DE TESTE DO SERVO DE CD

This mode can check the servo system operations of the optical pick-up system (= optical unit + BD74 board).

Note 1: Do not enter the this mode while any other test mode is in progress.
Note 2: Do not enter any other test mode while the this mode is in progress.

Como entrar no Modo de Teste do Servo de CD

Procedimento:

1. Press the [I/⏻] button to turn the power on.
2. Press the [FUNCTION] button to select CD function.
3. Press three buttons of [▶II], [TUNING + ▶▶ ▷▷I] and [I/⏻] simultaneously.
4. It enters the CD servo test mode and displays “xx xxxx”.

Como sair do Modo de Teste do Servo de CD

Procedimento:

1. Press three buttons of [▶II], [TUNING + ▶▶ ▷▷I] and [I/⏻] simultaneously.
2. It releases from the CD Servo Test Mode and returns to the ordinary CD function.

Operação da Chave:

[TUNING + ▶▶ ▷▷I], [– TUNING I◁◁ ◀◀]:

Use these keys to move the cursor to the right digit or to the left digit in the six-digit number, when changing the numeric value.
Press [TUNING + ▶▶ ▷▷I] to move the cursor to the right, and press [– TUNING I◁◁ ◀◀] to return the cursor to the left.

MODO DE SERVIÇO DO CD

This mode can move the SLED of the optical pick-up, and also can turn the optical pick-up laser power on and off.

Procedimento:

1. Press the [I/⏻] button to turn the power on.
2. Press three buttons of [▶II], [ENTER] and [I/⏻] simultaneously.
3. Press the [FUNCTION] button to select CD function.
4. It enters the CD service mode and displays “SERVICE”.
5. To release from this mode, press three buttons of [▶II], [ENTER] and [I/⏻] simultaneously.

Operação da Chave:

[TUNING + ▶▶ ▷▷I], [– TUNING I◁◁ ◀◀]:

Use these keys to move the SLED. When [TUNING + ▶▶ ▷▷I] is pressed in this mode, the SLED moves to outer circumference and the message “SLED OUT” is displayed.
When [– TUNING I◁◁ ◀◀] is pressed in this mode, the SLED moves to inner circumference and the message “SLED IN” is displayed.

[CD]:

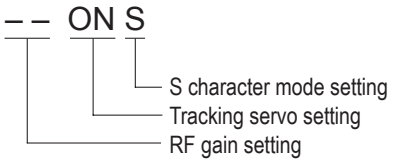
Use this key to turn the optical pick-up laser power on and off. When the laser power is turned on, the message “LD ON” is displayed. When the laser power is turned off, the message “LD OFF” is displayed.

MODO DA FÁBRICA DO CD

Note 1: Do not enter the this mode while any other testmode is in progress.
Note 2: Do not enter any other test mode while the this mode is in progress.

Procedimento:

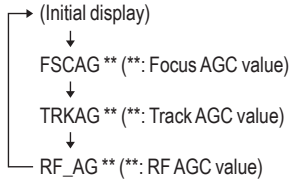
1. Press the [I/⏻] button to turn the power on.
2. Press the [FUNCTION] button to select CD function
3. Press three buttons of [▶II], [USB] and [I/⏻] simultaneously.
4. It enters the CD factory mode and the message “FACTORY” is displayed. When the [CD] button is pressed four times, the following message (initial display) is displayed.



Operação da Chave

[CD]:

The display changes in the following order whenever the button is pressed.



[DSGX]:

RF gain setting changes whenever the button is pressed.
“-- --”: No gain fixation.
“AL”: Fix to the gain for AL disc.
“RW”: Fix to the gain for RW disc.

[USB]:

Tracking servo setting changes whenever the button is pressed.
“ON”: Tracking servo ON.
“OFF”: Tracking servo OFF.

[FUNCTION]:

S character mode setting changes whenever the button is pressed.
“ ”: S character mode OFF.
“S”: S character mode ON.

5. To release from this mode, press three buttons of [▶II], [USB] and [I/⏻] simultaneously.

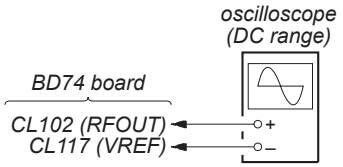
SEÇÃO 4
AJUSTES ELÉTRICOS

SEÇÃO CD

Note:

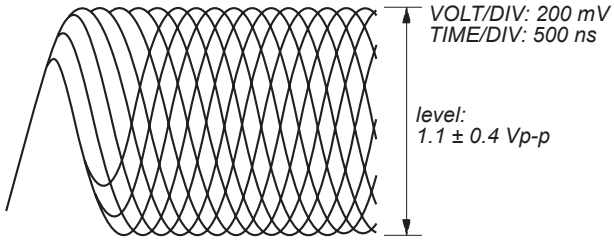
1. CD Block is basically constructed to operate without adjustment.
2. Use YEDS-18 disc (Part No. 3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10 MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.
5. Check the focus bias check when optical pick-up block is replaced.

VERIFICAÇÃO DO BIAS DE FOCO

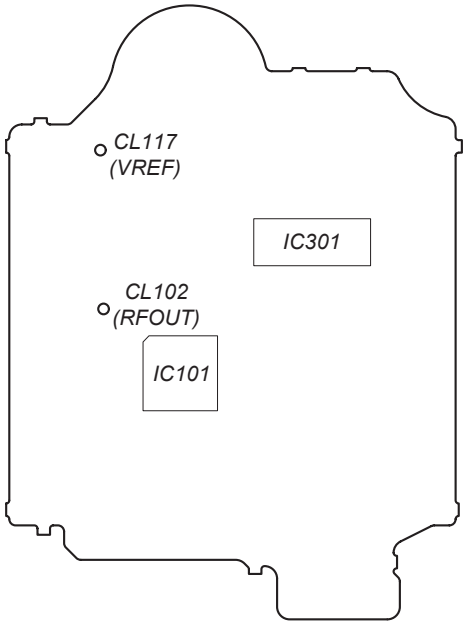


Procedimento:

1. Connect the oscilloscope to CL102 (RFOUT) and CL117 (VREF) on the BD74 board.
2. Press the [I/⏻] button to turn the power on, and press the [FUNCTION] button to select CD function.
3. Set disc (YEDS-18) and press the [▶II] button to playback.
4. Confirm that oscilloscope waveform is as shown in the figure below (eye pattern).
   A good eye pattern means that the diamond shape (◊) in the center of the waveform can be clearly distinguished.

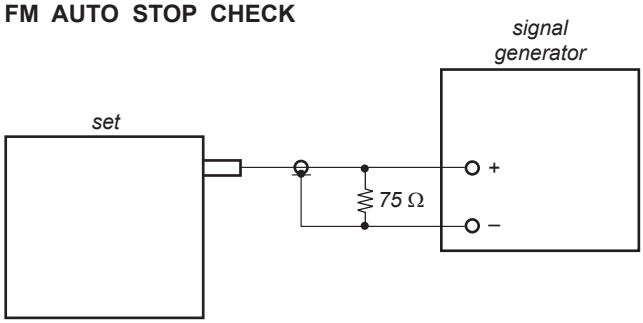


Checking Location:
– BD74 Board (Side B) –



SEÇÃO TUNER | 0 dB = 1 μV

FM AUTO STOP CHECK



Procedure:

1. Turn the power on.
2. Input the following signal from Signal Generator to FM antenna input directly.

Carrier frequency : A = 87.5 MHz, B = 98 MHz, C = 108 MHz
Deviation : 75 kHz
Modulation : 1 kHz
ANT input : 35 dBu (EMF)

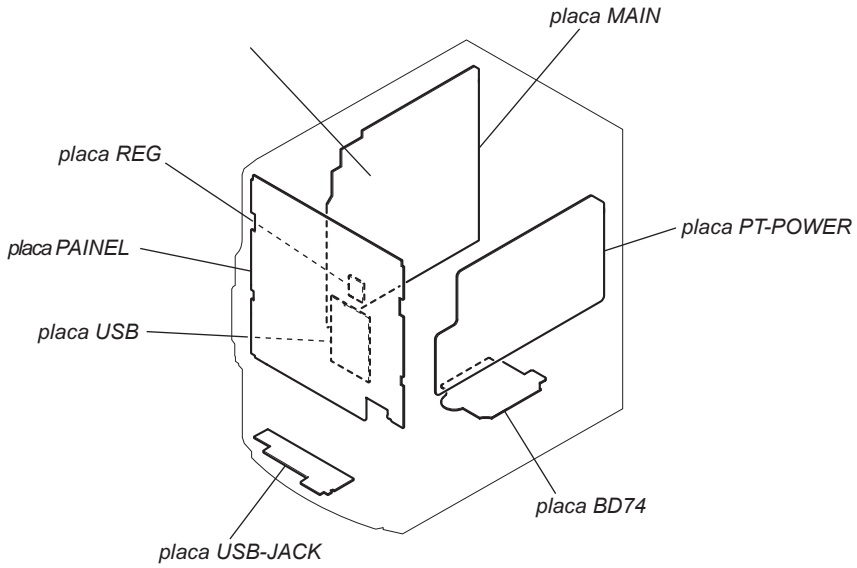
Note: Please use 75 ohm "coaxial cable" to connect SG and the set. You cannot use video cable for checking.
Please use SG whose output impedance is 75 ohm.

3. Set to FM tuner function and scan the input FM signal with automatic scanning.
4. Confirm that input Frequency of A, B and C detected and automatic scanning stops.

The stop of automatic scanning means "The station signal is received in good condition".

SEÇÃO 5
DIAGRAMAS

- **Localização das Placas de Circuito**



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS. (In addition to this, the necessary note is printed in each block.)

For Printed Wiring Boards.

Note:

- ○——: Parts extracted from the component side.
- ——: Parts extracted from the conductor side.
- : Indicates side identified with part number.
- : Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)

Caution:

Pattern face side: (SIDE B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (SIDE A)	Parts on the parts face side seen from the parts face are indicated.

For Schematic Diagrams.

Note:

- All capacitors are in μF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : Internal component.
- : Nonflammable resistor.
- : Panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- : B+ Line.
- : B– Line.
- : Adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.

– BD74 Board –
no mark: CD PLAY

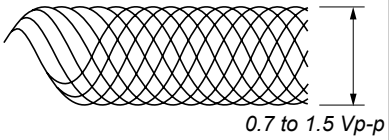
– Other Boards –
no mark: TUNER (FM/AM)
( ): CD PLAY
< >: TAPE PLAY
[ ]: TAPE REC
* : Impossible to measure

- Voltages are taken with VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - : TUNER (FM)
  - : TUNER (AM)
  - : CD
  - : USB
  - : PC IN

• **Formas de ondas**

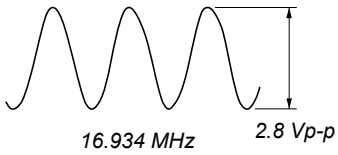
– BD74 Board –

① IC101 ② (RFOUT)
(CD play mode)



200 mV/DIV, 500 nsec/DIV

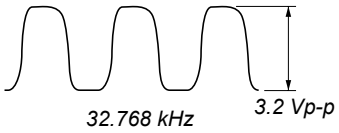
② IC101 ⑫ (XOUT)



1 V/DIV, 20 nsec/DIV

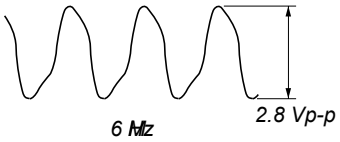
– PANEL Board –

① IC301 ⑭ (X1A)



1 V/DIV, 10 µsec/DIV

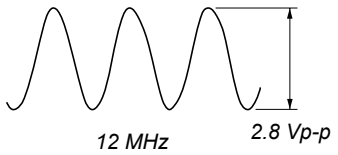
② IC301 ⑫ (X1)



1 V/DIV, 100 nsec/DIV

– USB Board –

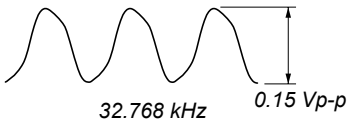
① IC901 ⑦ (CF2)



1 V/DIV, 20 nsec/DIV

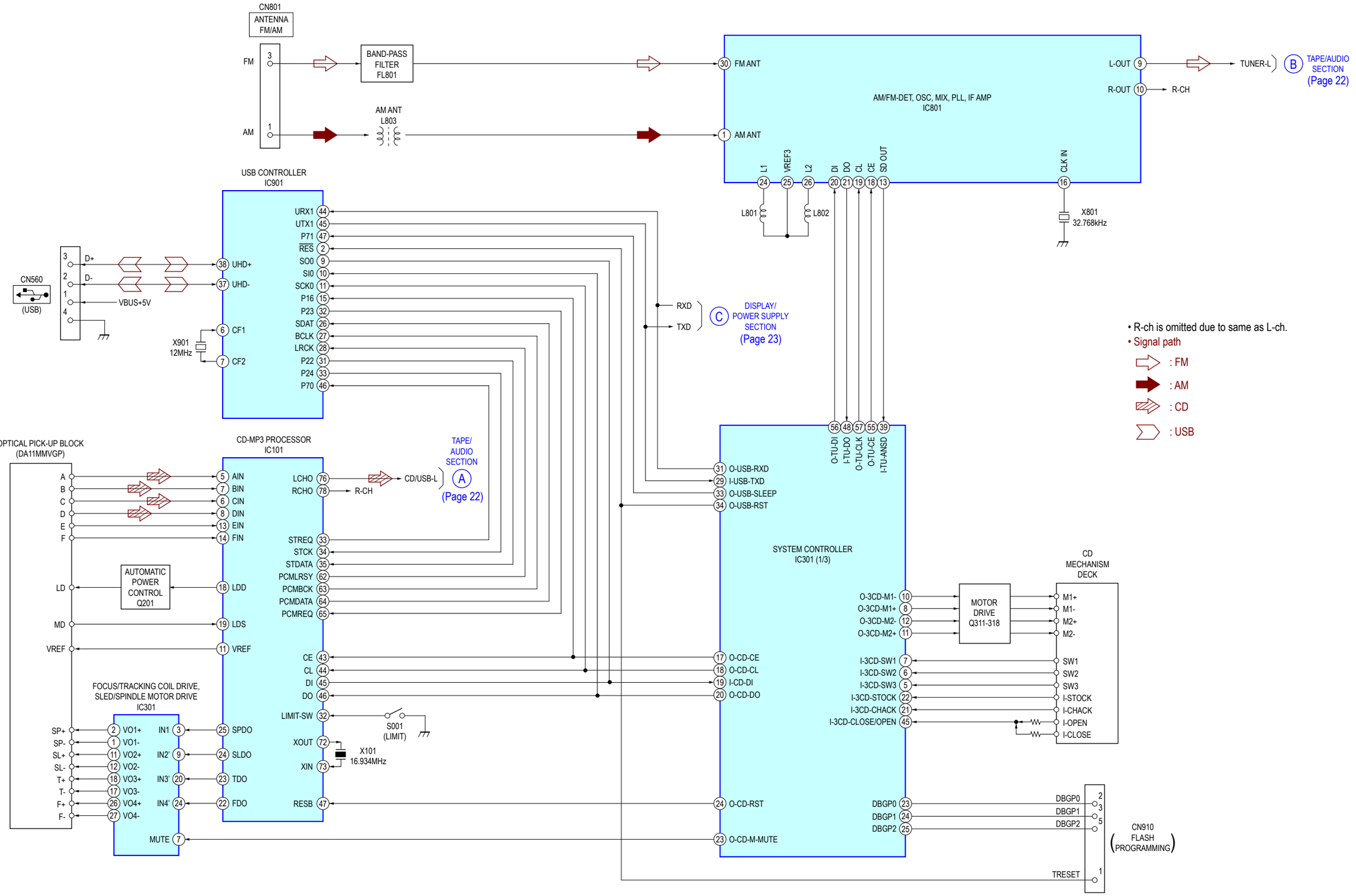
– MAIN-AMP Board –

① IC801 ⑯ (CLK IN)

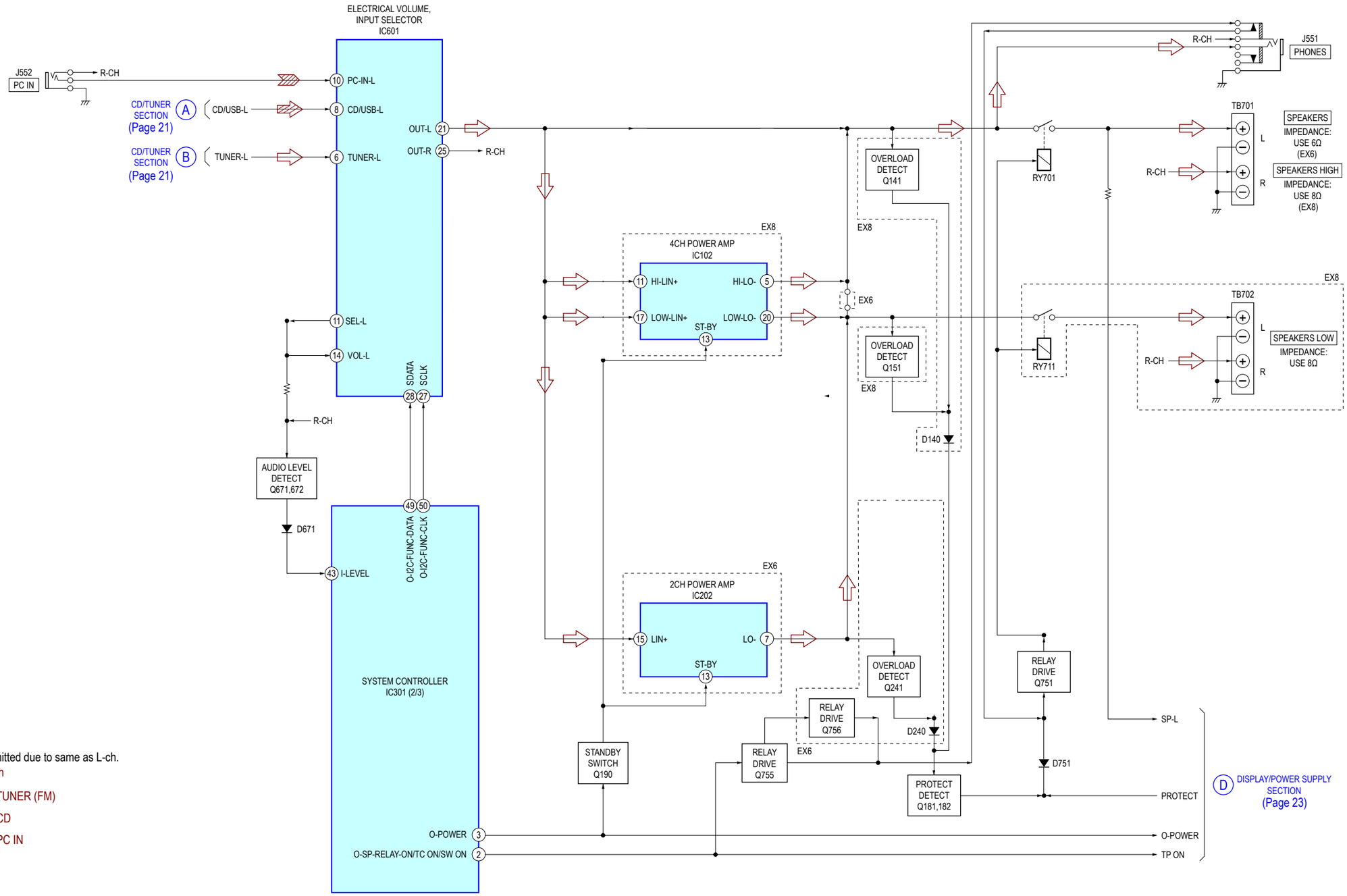


200 mV/DIV, 5 µsec/DIV

5-1. DIAGRAMA EM BLOCOS –Seção CD/TUNER –

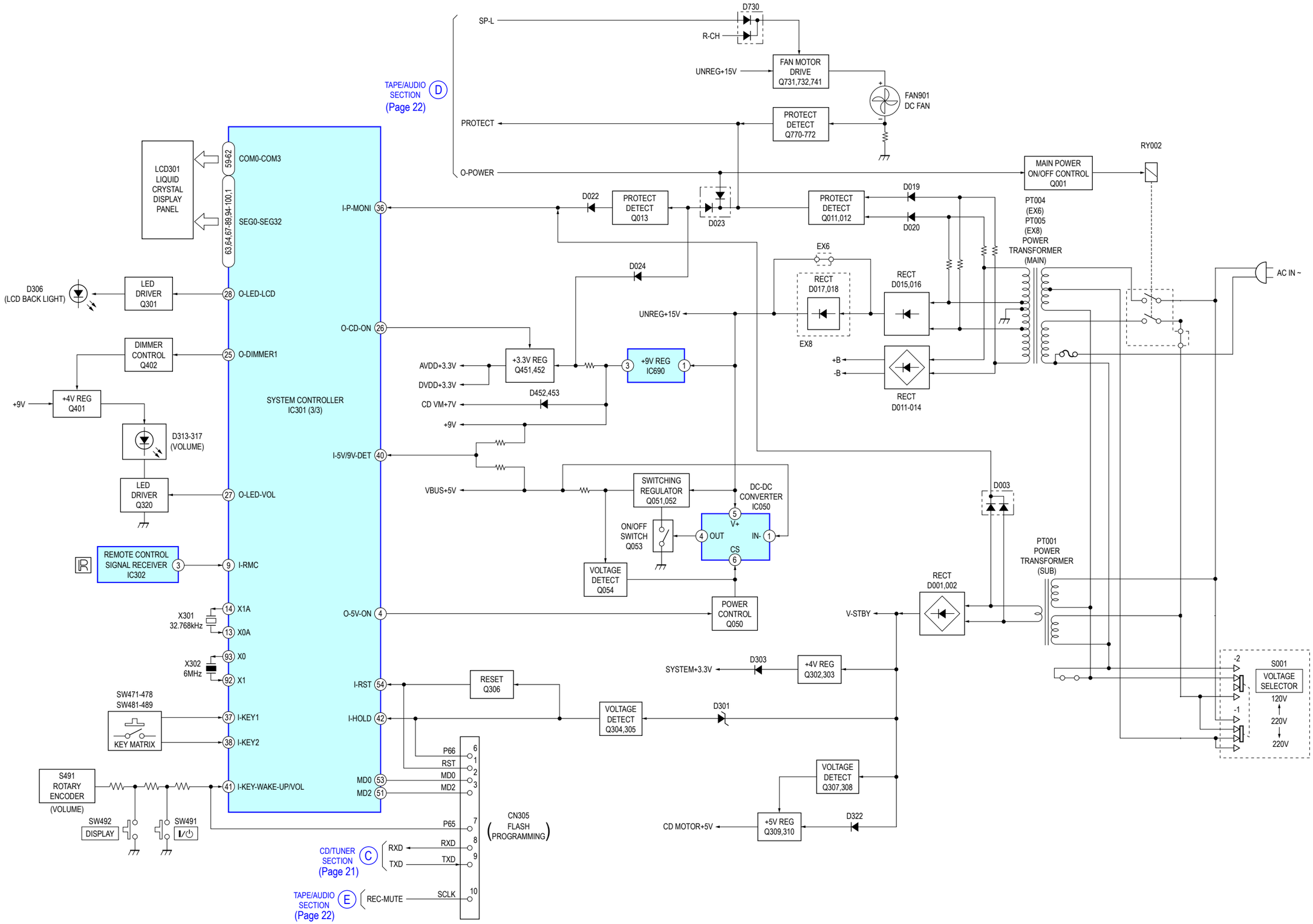


5-2. DIAGRAMA EM BLOCO –Seção TAPE/AUDIO –



- R-ch is omitted due to same as L-ch.
- Signal path
  - : TUNER (FM)
  - : CD
  - : PC IN
  - :
  - :

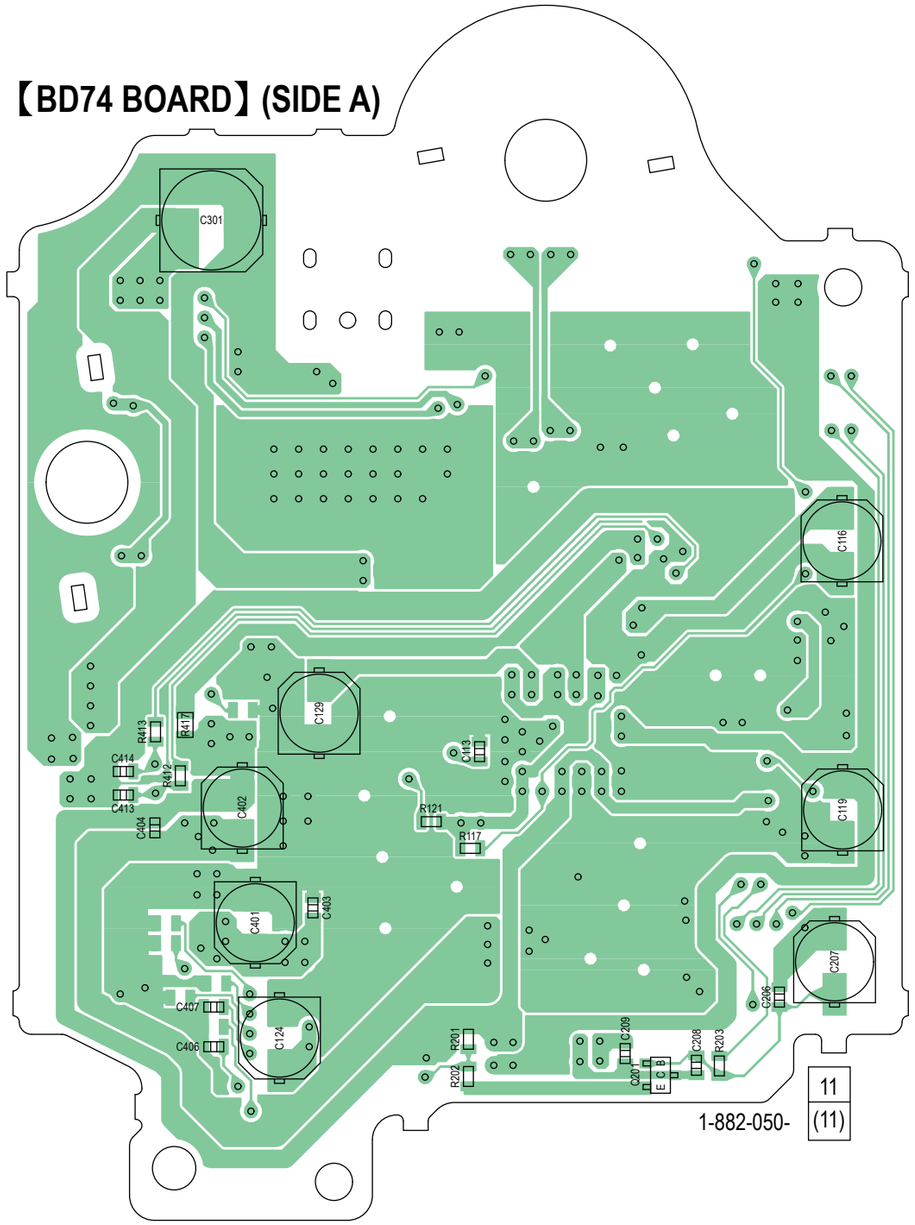
5-3. DIAGRAMA EM BLOCO –Seção DISPLAY/POWER SUPPLY –



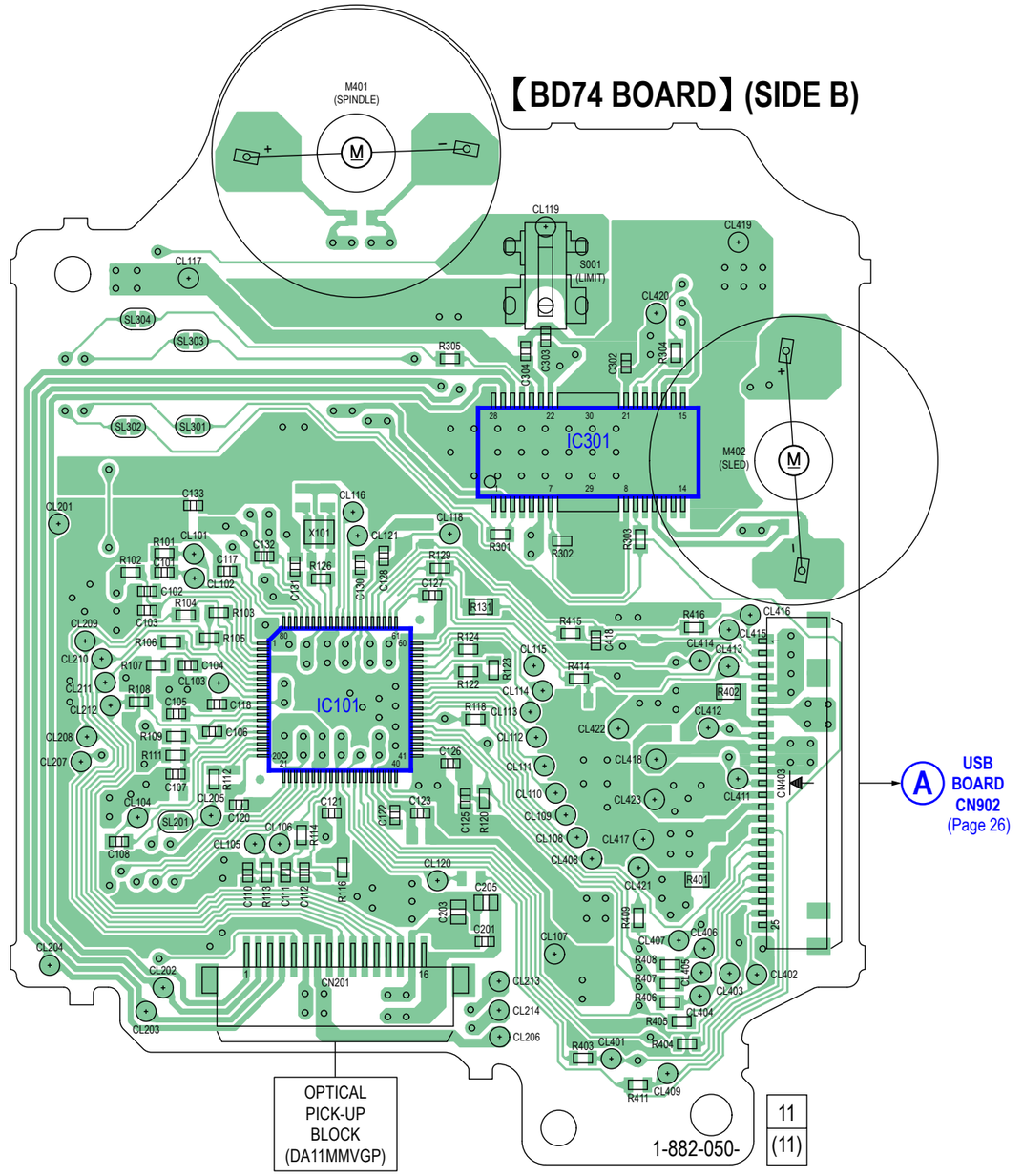
5-4. PLACA DE CIRCUITO IMPRESSO – Seção CD –

• : Utilizada solda sem chumbo.

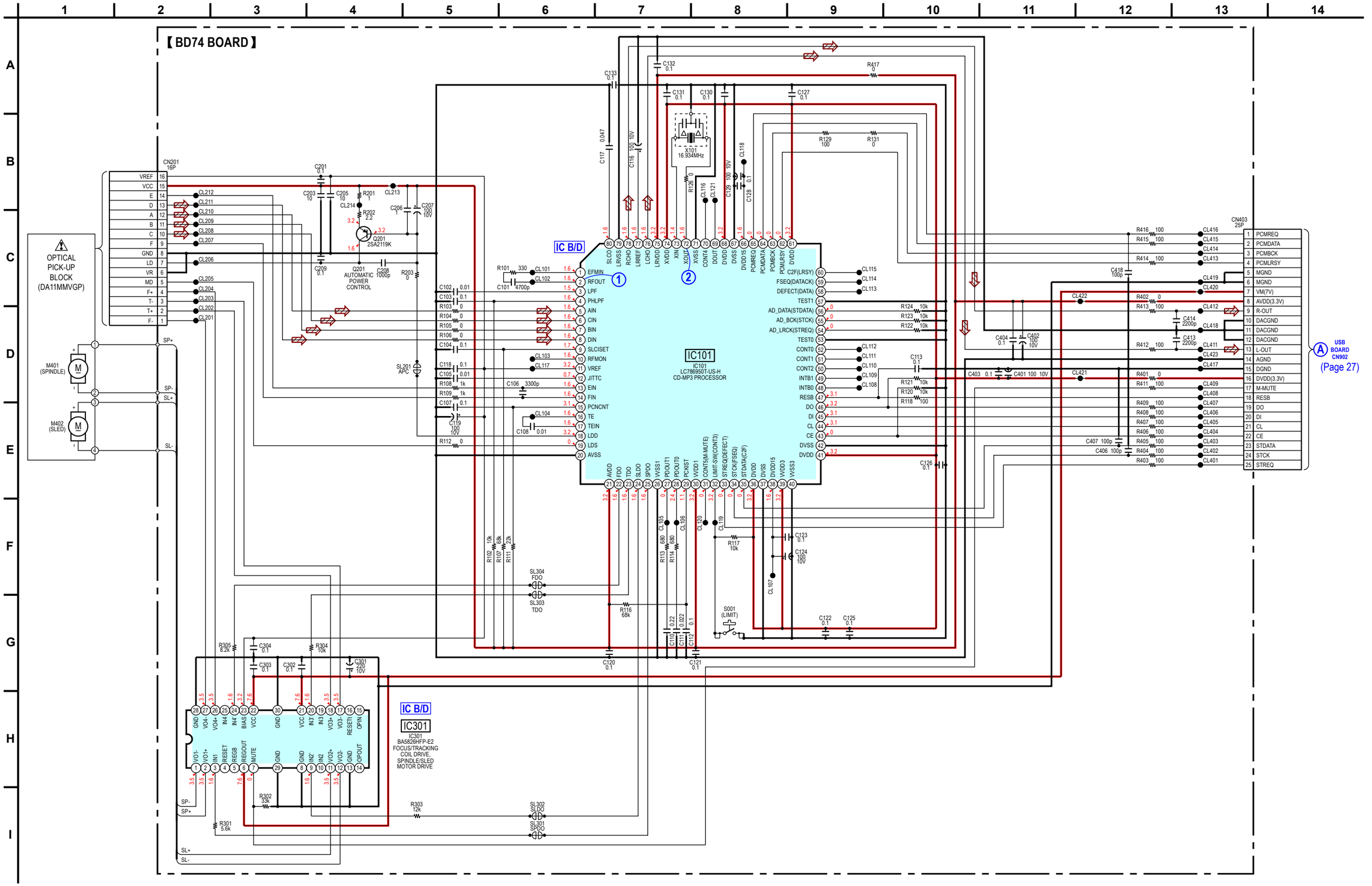
【BD74 BOARD】(SIDE A)



【BD74 BOARD】(SIDE B)

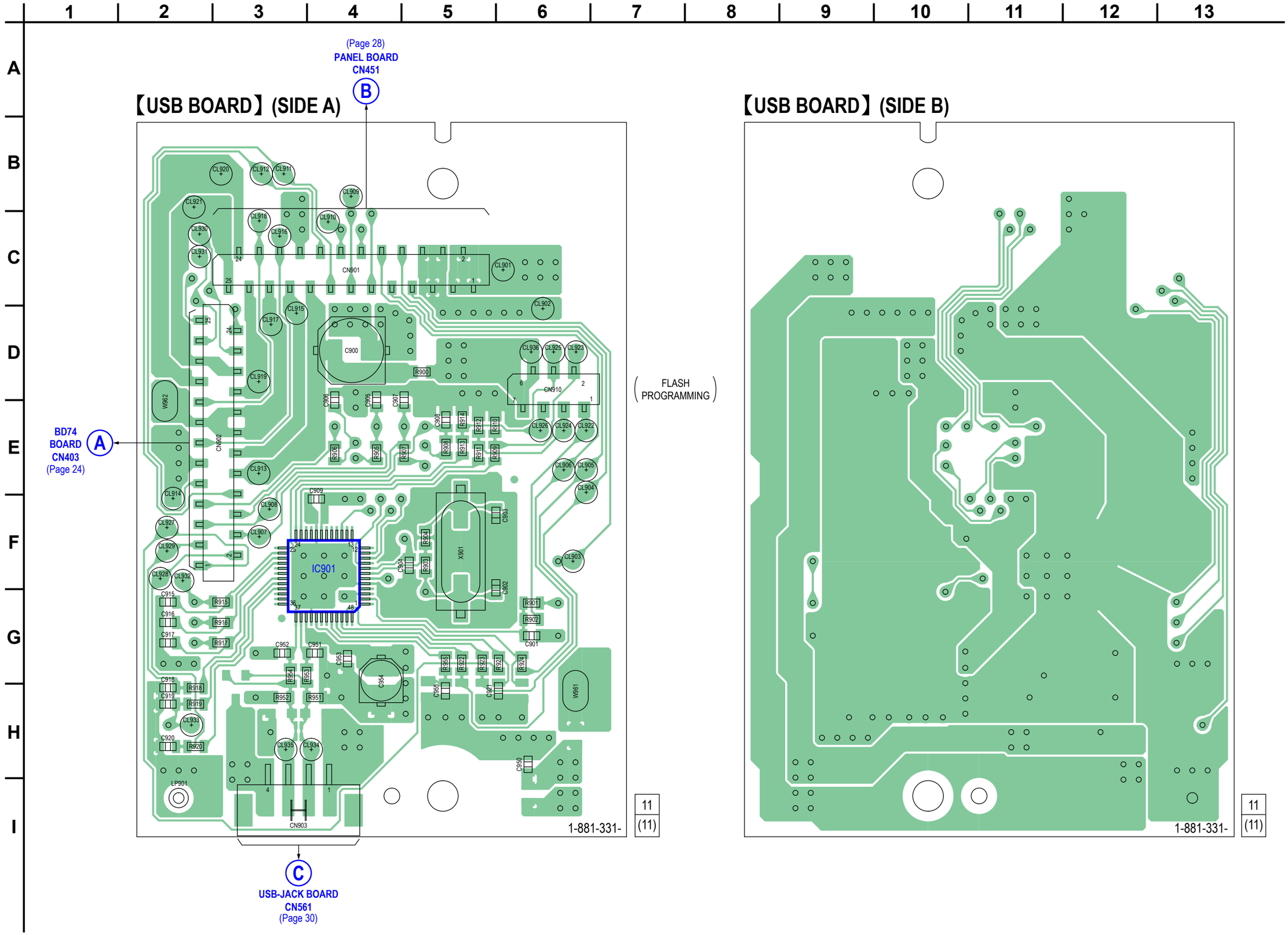


5-5. DIAGRAMA ESQUEMATICO – Seção CD –

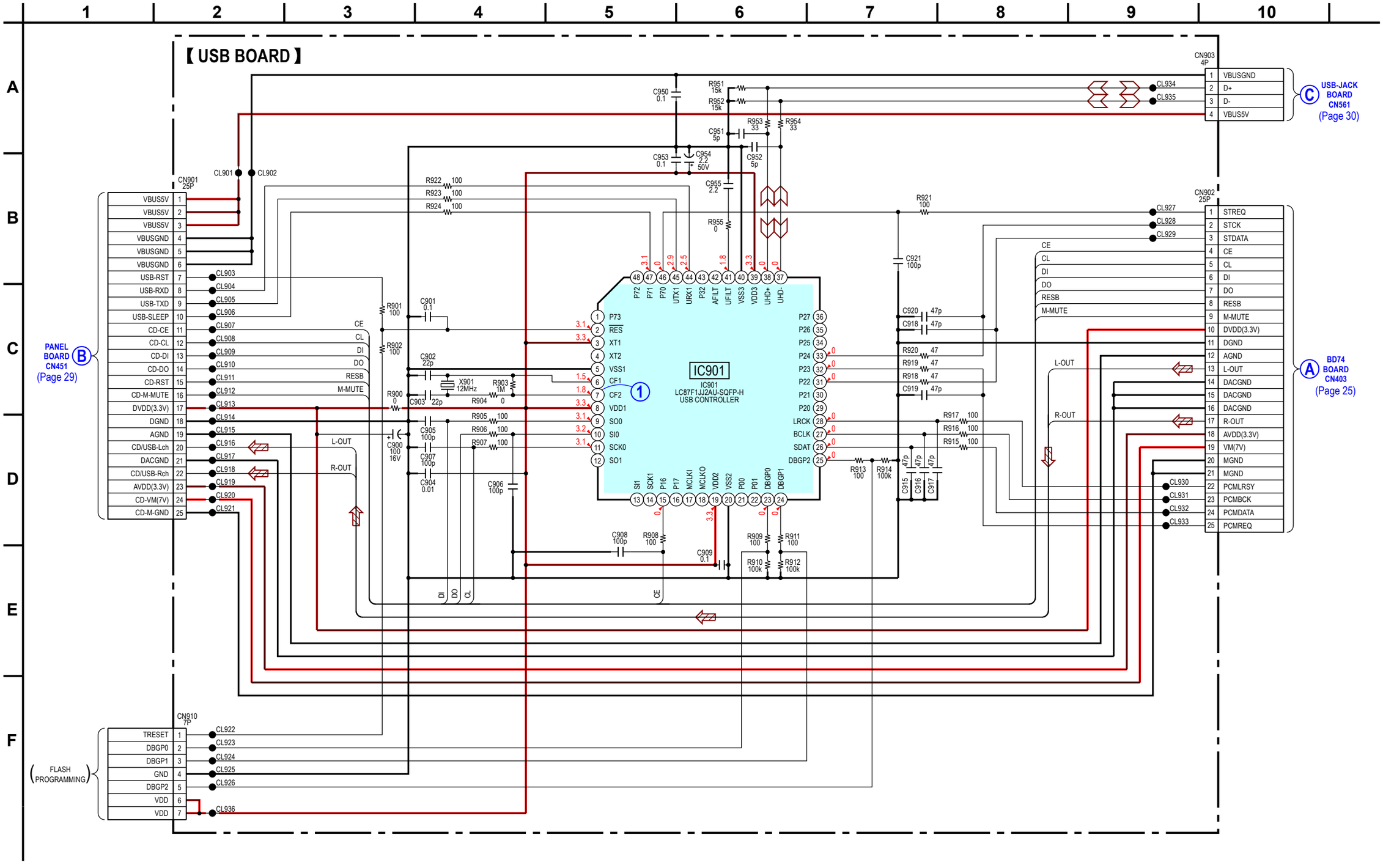


5-6. PLACA DE CIRCUITO IMPRESSO – Seção USB –

• : Utilizada solda sem chumbo



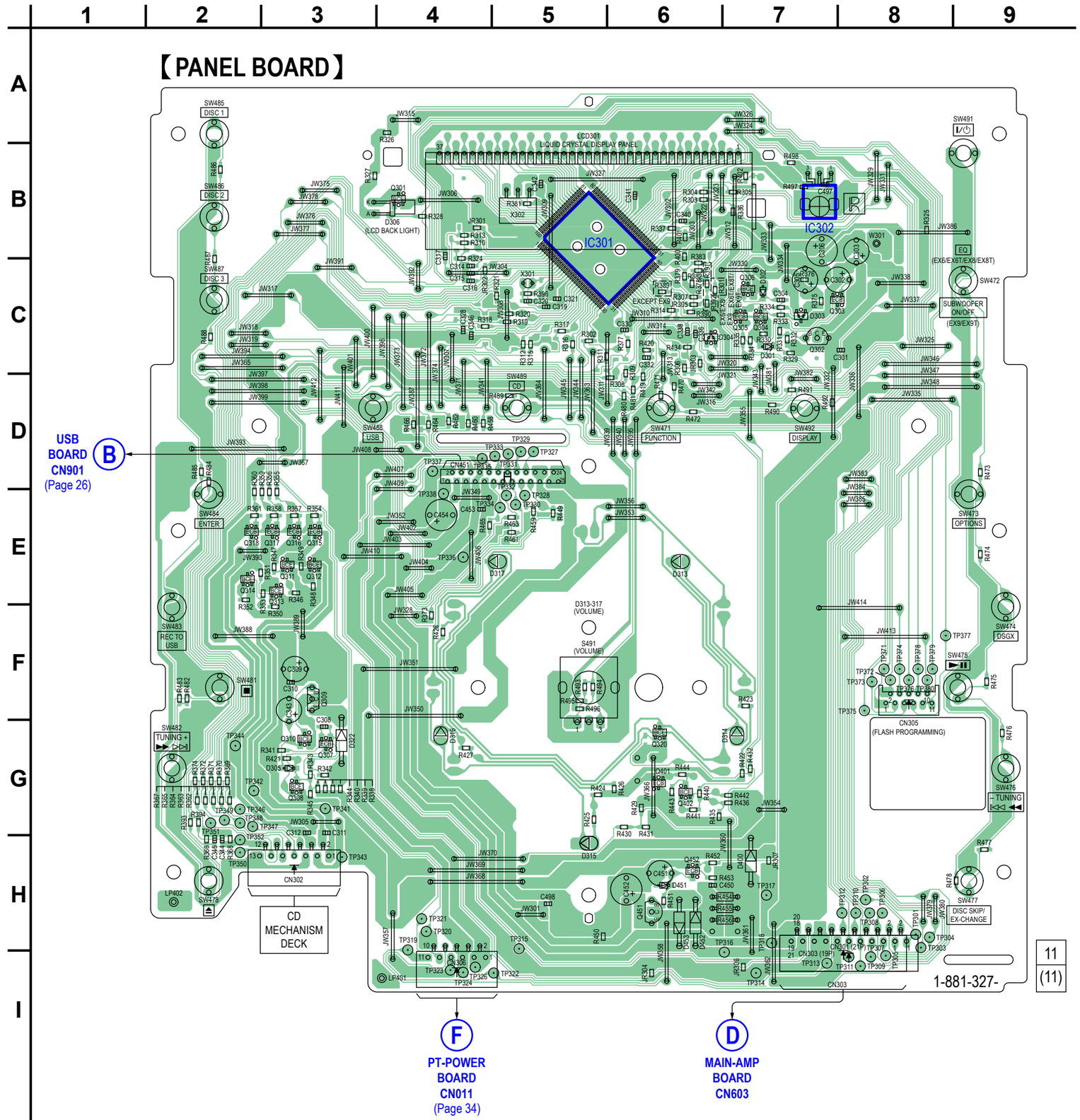
5-7. DIAGRAMA ESQUEMATICO –Seção USB –



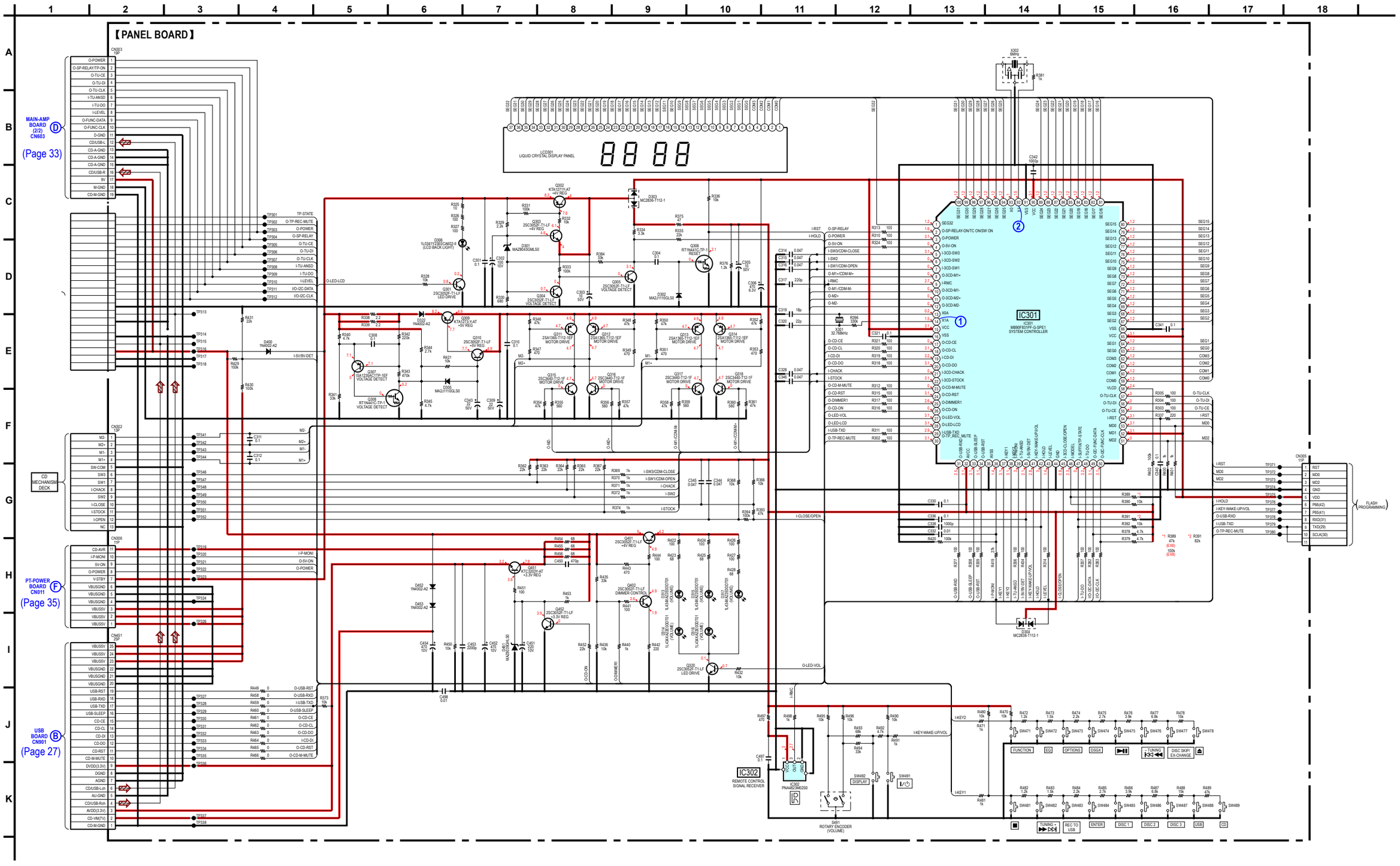
5-8. PLACA DE CIRCUITO IMPRESSO – Seção PAINEL –

• : Utilizada solda sem chumbo.

【PANEL BOARD】

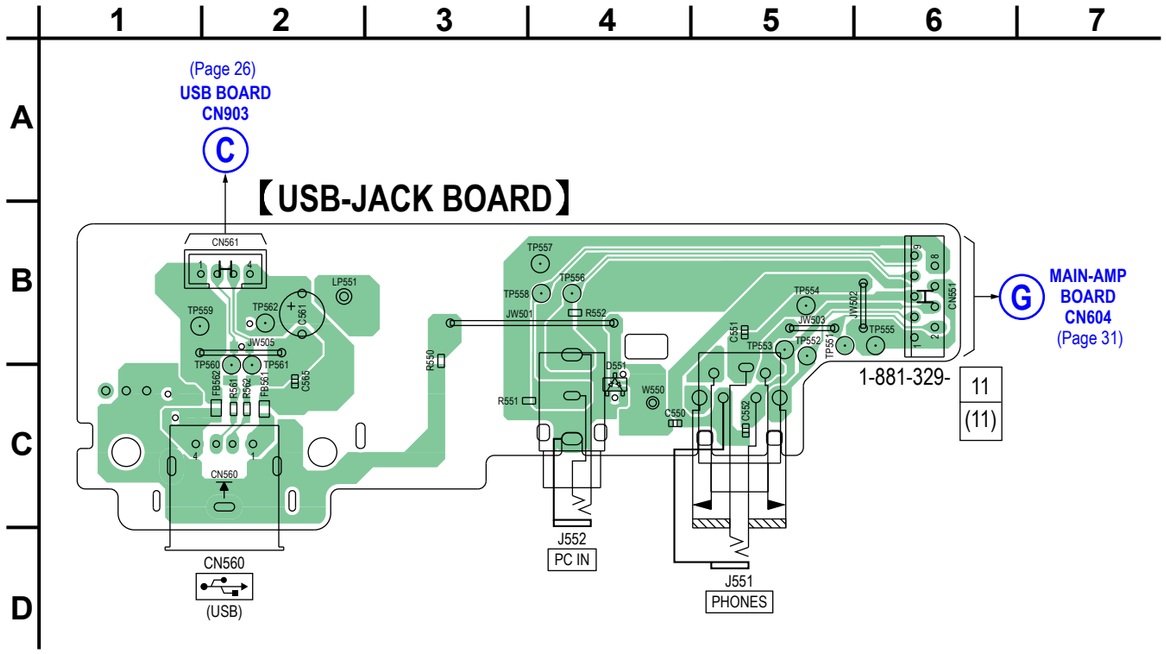


5-9. DIAGRAMA ESQUEMATICO – Seção PANEL –

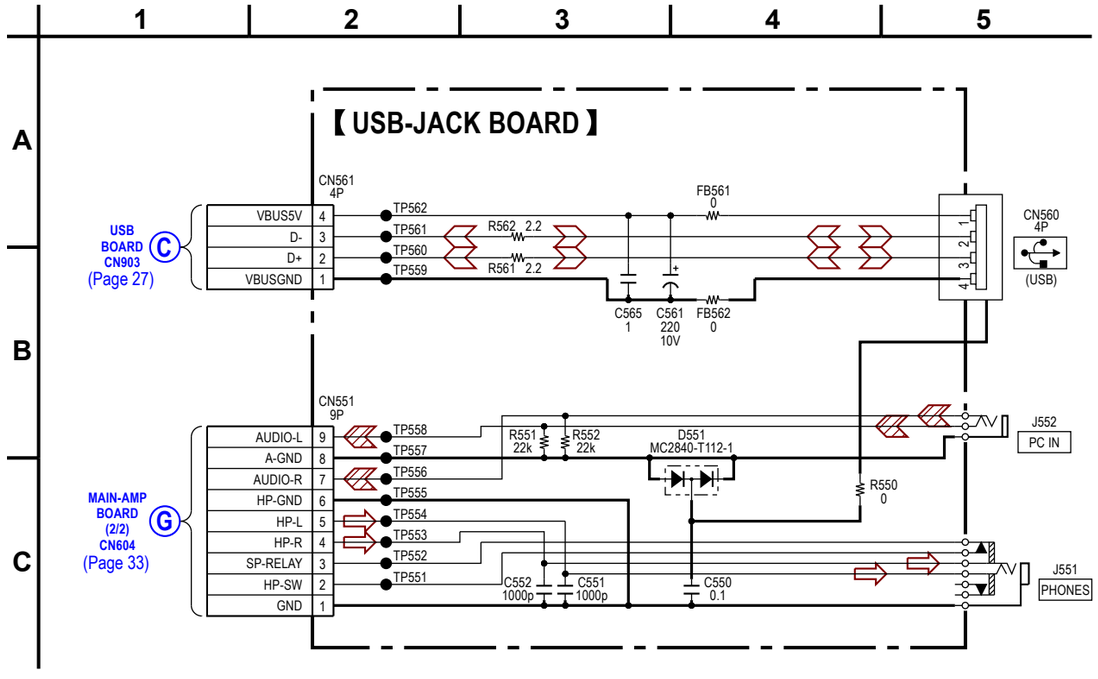


5-10. PLACA DE CIRCUITO IMPRESSO – Seção USB-JACK –

• : Utilizada solda sem chumbo

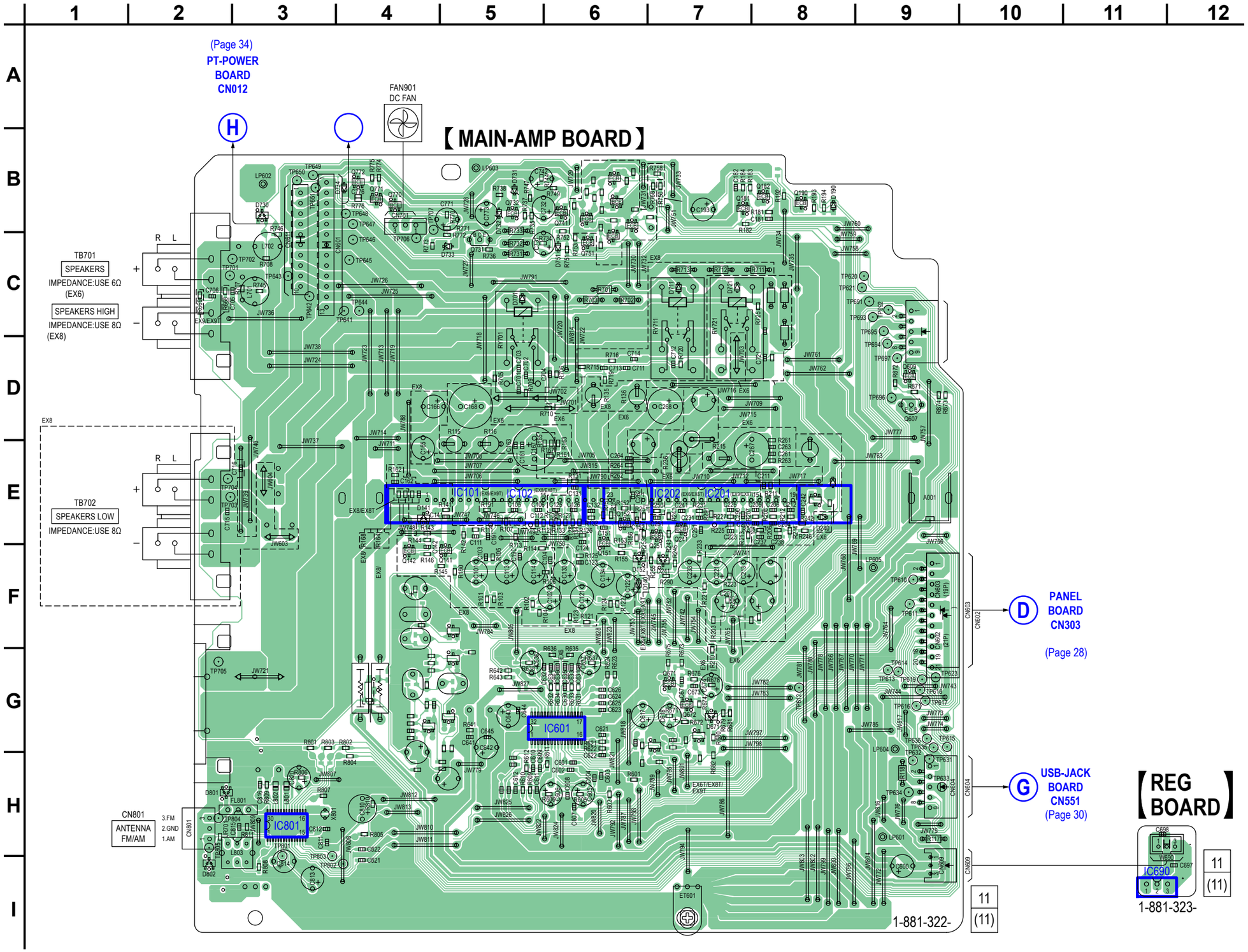


5-11. DIAGRAMA ESQUEMATICO – Seçào USB-JACK –

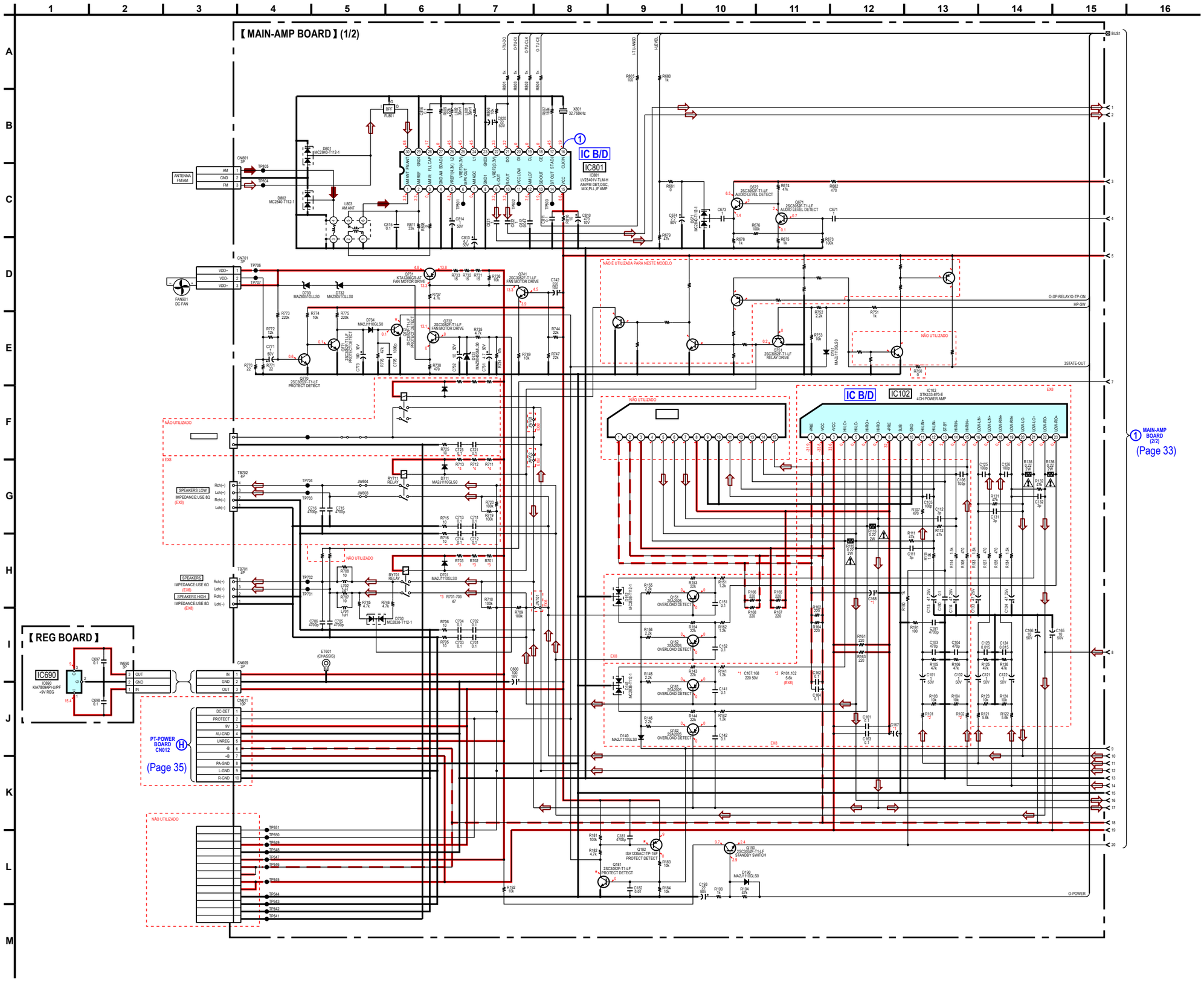


5-12. PLACA DE CIRCUITO IMPRESSO – Seção MAIN-AMP –

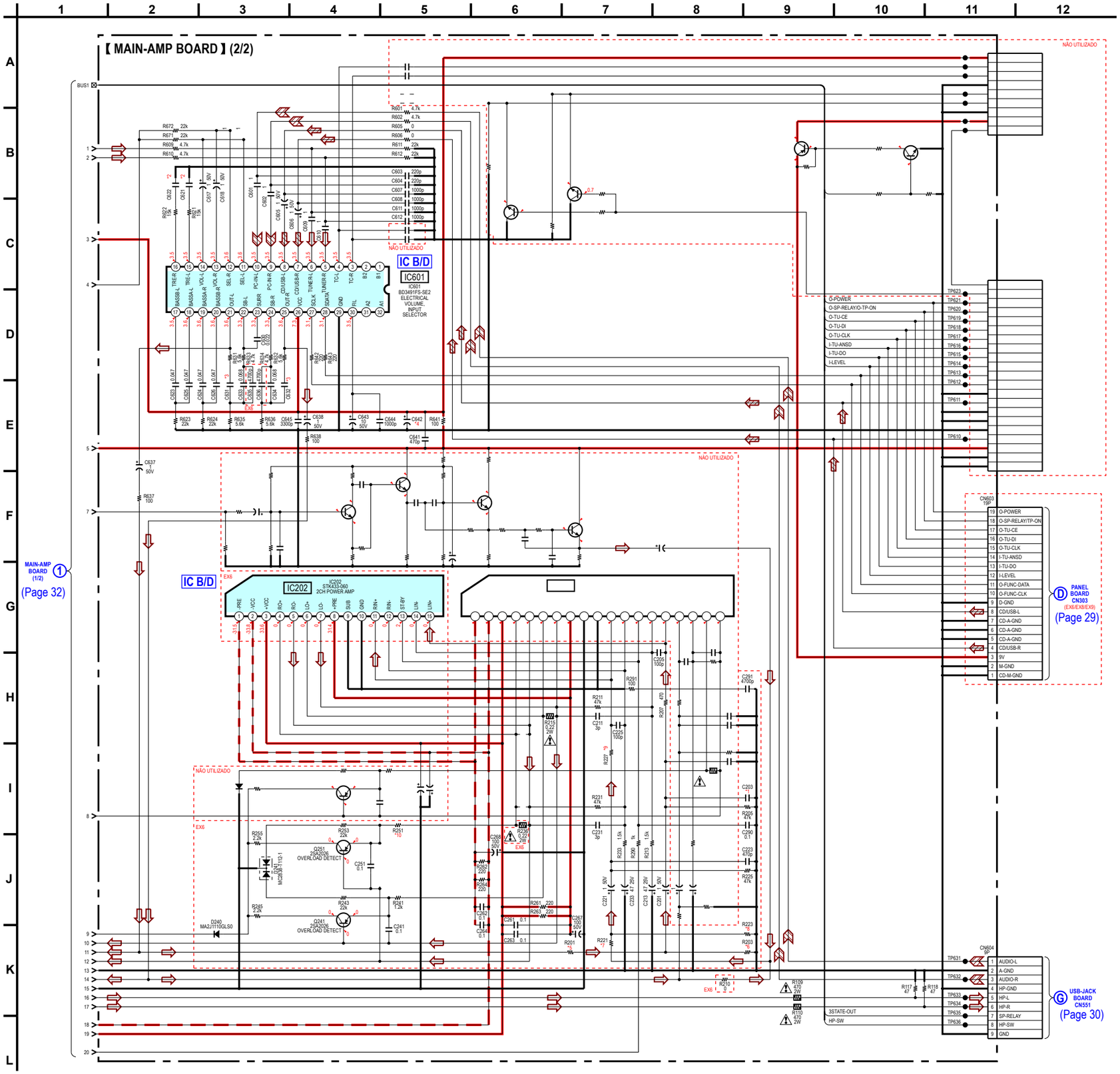
• :Utilizada solda sem chumbo



5-13. DIAGRAMA ESQUEMATICO – Seção MAIN-AMP (1/2) –

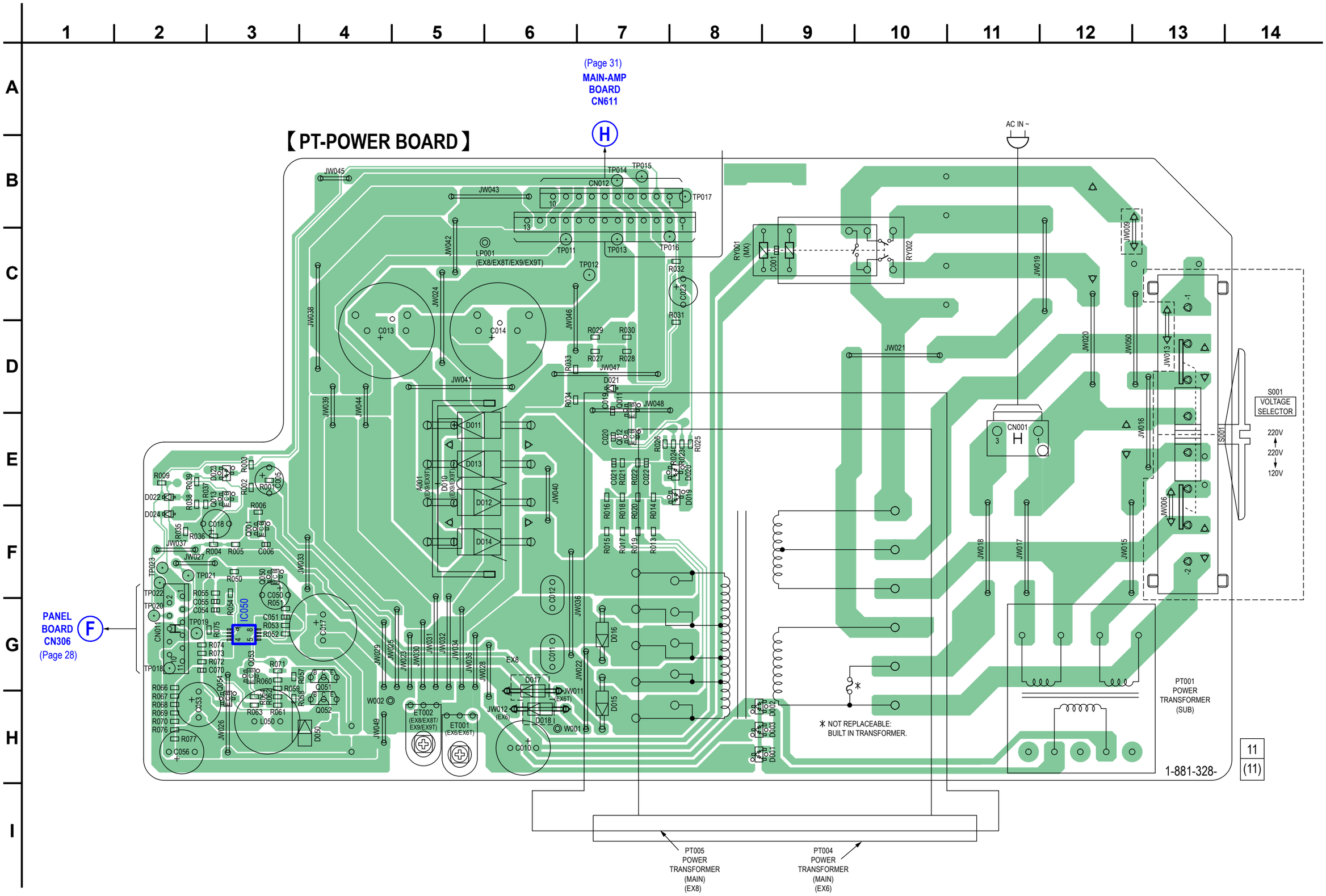


5-14. DIAGRAMA ESQUEMATICO – Seção MAIN-AMP (2/2) –

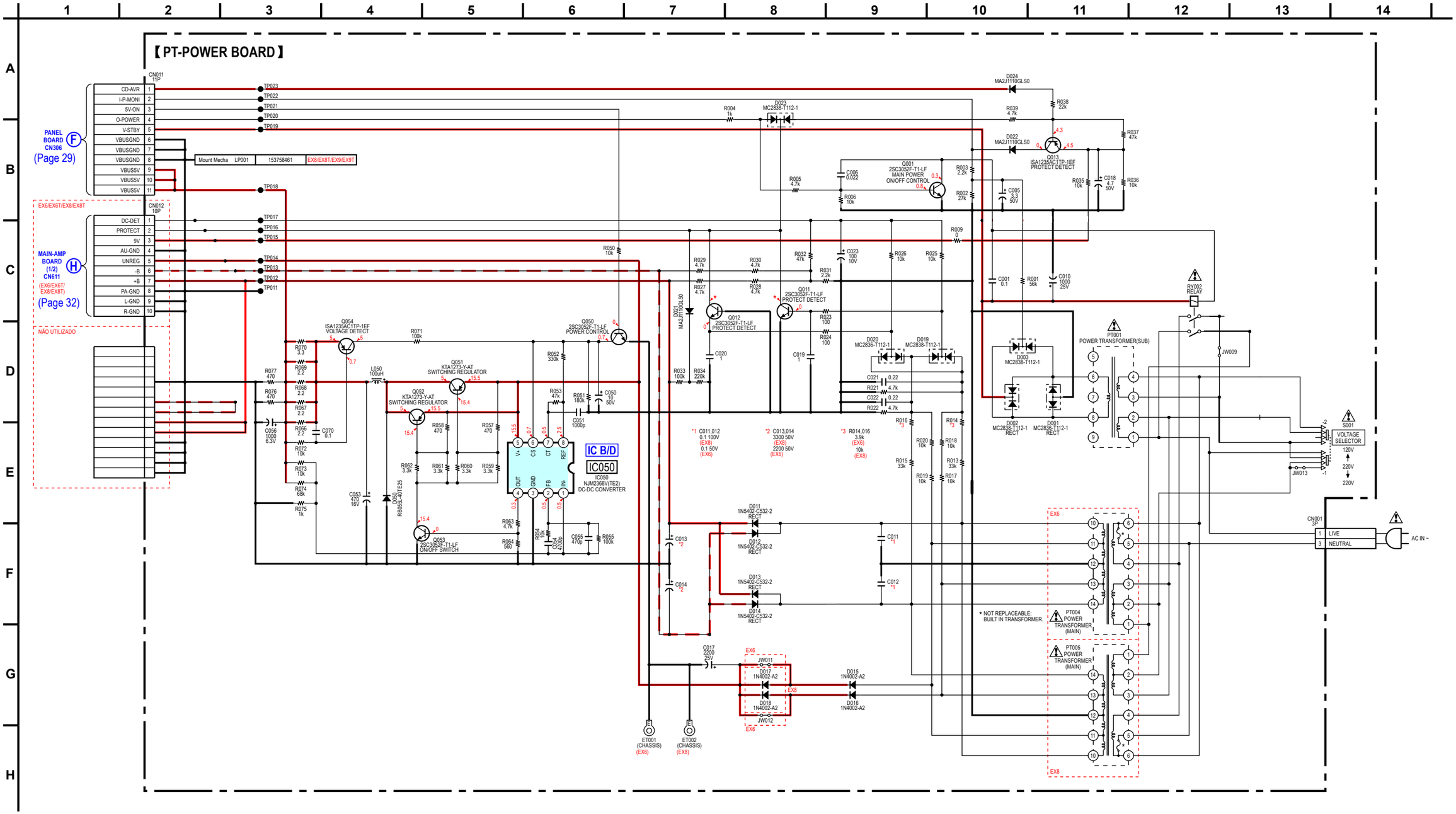


5-15. PLACA DE CIRCUITO IMPRESSO – Seção POWER SUPPLY –

• : Utilizada solda sem chumbo

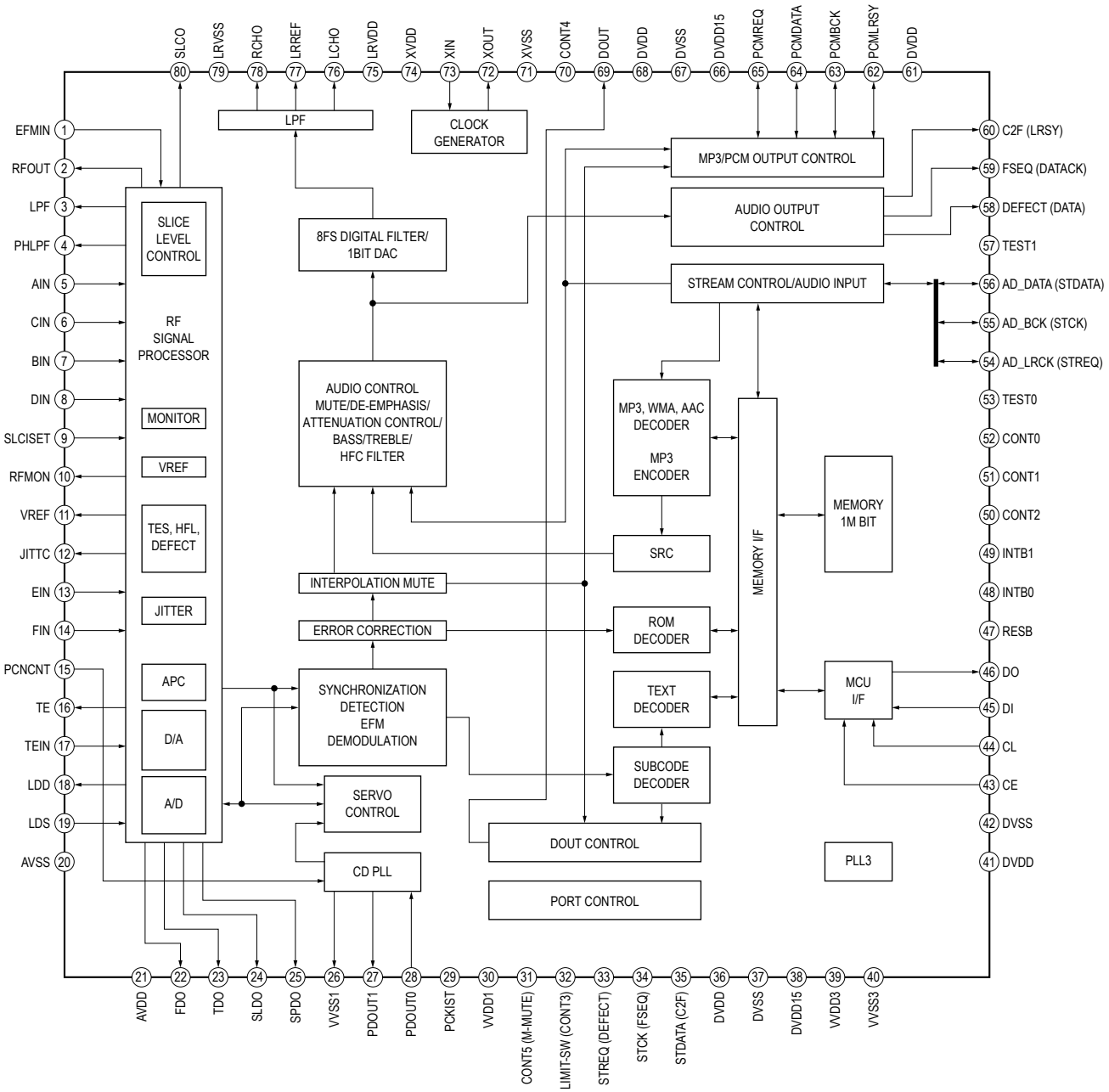


5-16. DIAGRAMA ESQUEMÁTICO – Seção POWER SUPPLY –

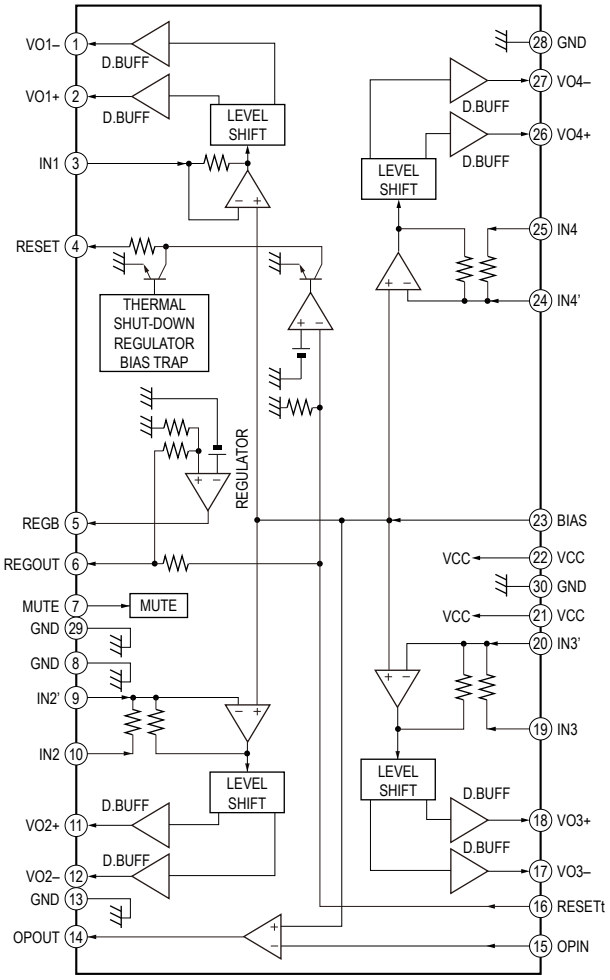


- **Diagramas em Blocos dos ICs**

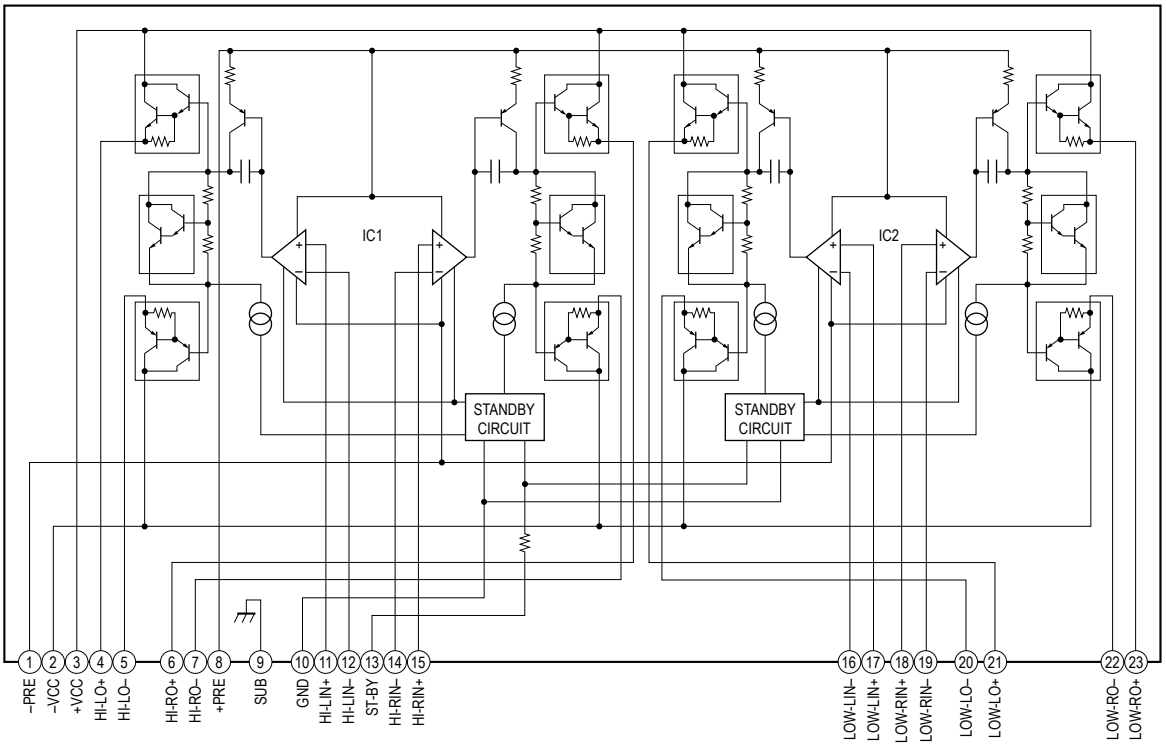
IC101 LC786950T-US-H (BD74 Board)



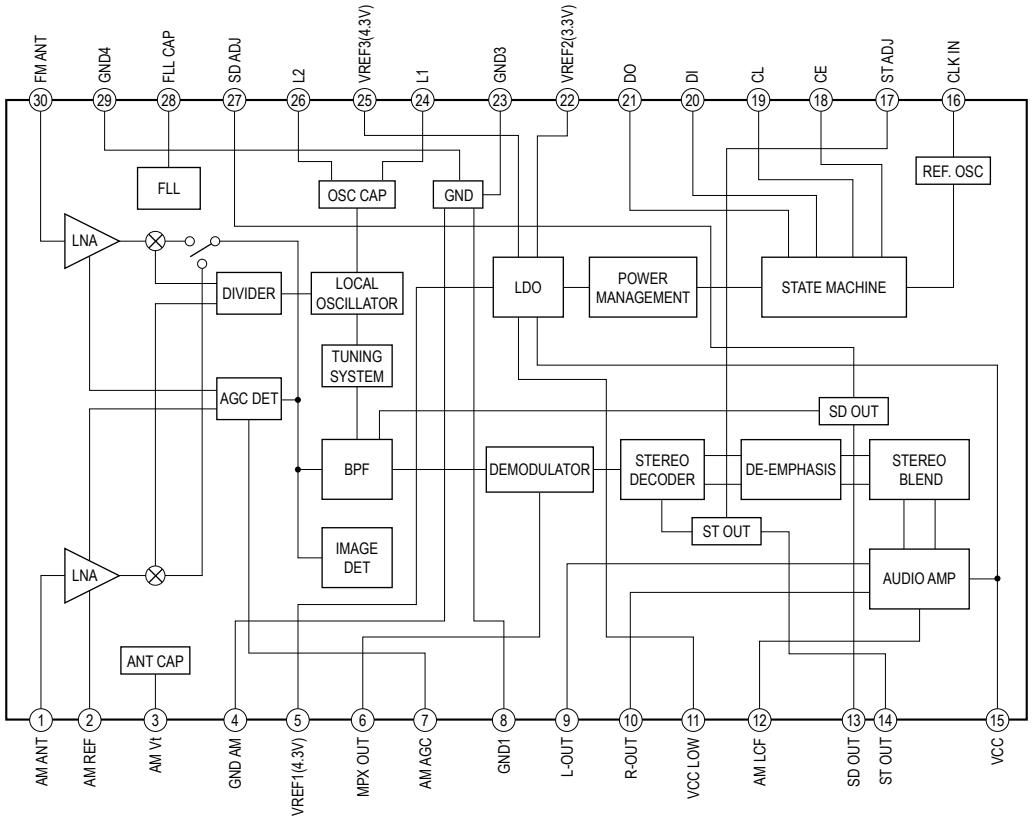
IC301 BA5826HFP-E2 (BD74 Board)



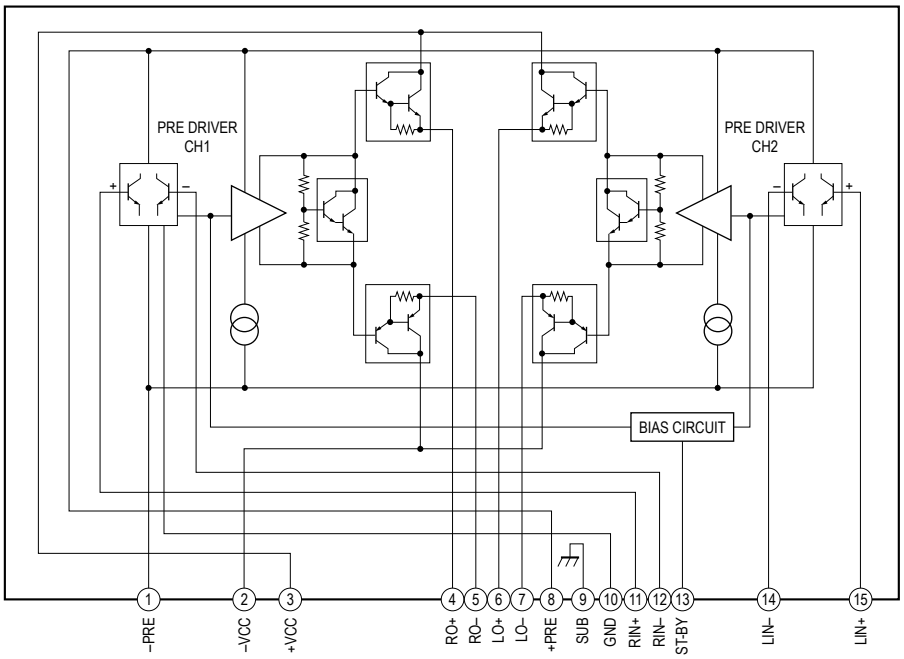
IC102 STK433-870-E (MAIN-AMP Board (1/2)) (HCD-EX8 only)



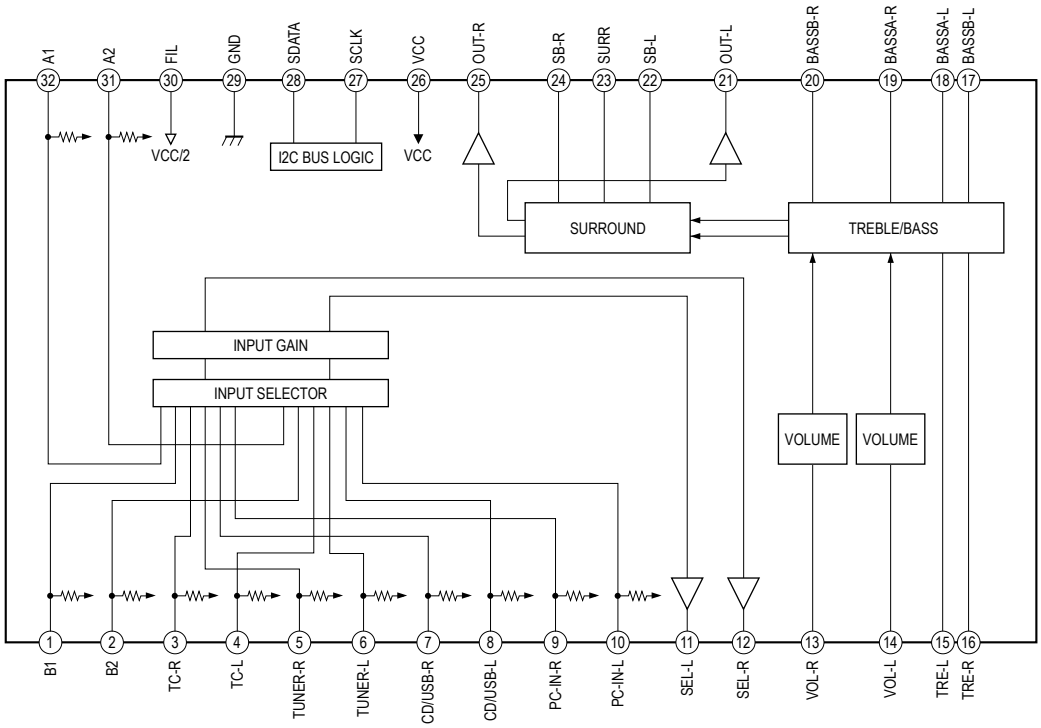
IC801 LV23401V-TLM-H (MAIN-AMP Board (1/2))



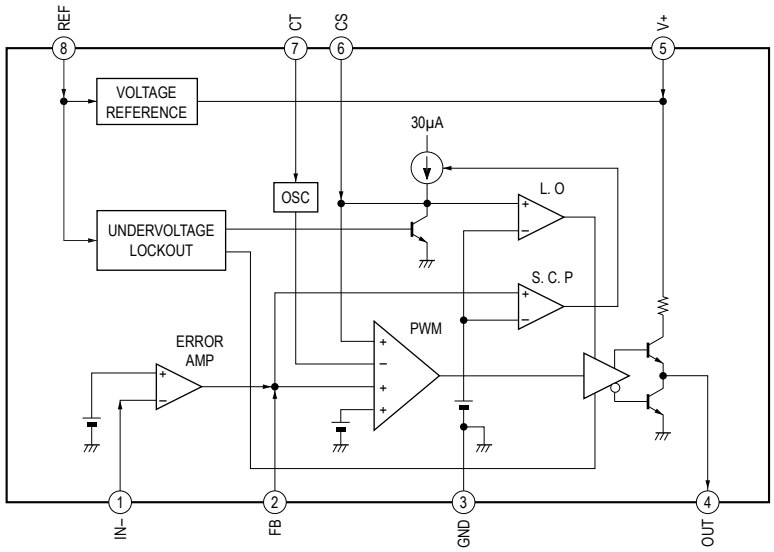
IC202 STK433-060 (MAIN-AMP Board (2/2)) (HCD-EX6)



IC601 BD3491FS-SE2 (MAIN-AMP Board (2/2))



IC050 NJM2368V(TE2) (PT-POWER Board)



• **IC Pin Function Descriptions**

USB BOARD IC901 LC87F1JJ2AU-SQFP-H (USB CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	P73	O	Not used. (Open)
2	$\overline{\text{RES}}$	—	USB control reset pin
3	XT1	—	Not used. (Connect to VDD)
4	XT2	O	Not used. (Open)
5	VSS1	—	Ground
6	CF1	I	Oscillation signal input (12 MHz)
7	CF2	O	Oscillation signal output (12 MHz)
8	VDD1	—	Power supply pin (+3.3 V)
9	SO0	O	CD digital signal processor serial data communication signal output
10	SI0	I	CD digital signal processor serial data communication signal input
11	SCK0	I/O	CD digital signal processor clock communication signal input/output
12	SO1	O	Not used. (Open)
13	SI1	O	Not used. (Open)
14	SCK1	O	Not used. (Open)
15	P16	I	CD digital signal processor enable communication signal input
16	P17	O	Not used. (Open)
17	MCLKI	O	Not used. (Open)
18	MCLKO	O	Not used. (Open)
19	VDD2	—	Power supply pin (+3.3 V)
20	VSS2	—	Ground
21, 22	P00, P01	O	Not used. (Open)
23 to 25	DBGP0 to DBGP2	O	For debagger pin
26	SDAT	I	USB record MP3 serial data signal input
27	BCLK	I	USB record MP3 serial data shift clock signal input
28	LRCK	I	USB record MP3 serial data word clock signal input
29, 30	P20, P21	O	Not used. (Open)
31	P22	O	USB playback serial data signal output
32	P23	O	USB record MP3 serial data request signal output
33	P24	O	USB playback serial data communication clock signal output
34 to 36	P25 to P27	O	Not used. (Open)
37	UHD–	I/O	USB D– serial data input/output
38	UHD+	I/O	USB D+ serial data input/output
39	VDD3	—	Power supply pin (+3.3 V)
40	VSS3	—	Ground
41	UFILT	I	USB interface PLL filter circuit connection pin (Fixed at L in this set)
42	AFILT	O	Not used. (Open)
43	P32	O	Not used. (Open)
44	URX1	I	System controller input communication signal input
45	UTX1	O	System controller output communication signal output
46	P70	I	USB playback serial data request signal input
47	P71	I	USB controller command processing cancel signal input
48	P72	O	Not used. (Open)

PANEL BOARD IC301 MB90F831PF-G-SPE1 (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	SEG32	O	Segment drive signal output for the liquid crystal display panel
2	O-SP-RELAY-ON/ TC ON/SW ON	O	Speaker relay drive signal output, tape power ON/OFF control signal output (HCD-EX6T/ EX8T/EX9T) and subwoofer function ON/OFF control signal output (HCD-EX9/EX9T)
3	O-POWER	O	Main power ON/OFF control signal output (H: main power ON)
4	O-5V-ON	O	CD and VBUS power ON/OFF control signal output (H: CD and VBUS power ON)
5	I-3CD-SW3	I	CD motor disc tray close switch detection signal input from the CD mechanism deck
6	I-3CD-SW2	I	CD motor disc tray address switch detection signal input from the CD mechanism deck
7	I-3CD-SW1	I	CD motor disc tray open switch detection signal input from the CD mechanism deck
8	O-3CD-M1+	O	CD spindle motor drive (+) signal output for the CD mechanism deck
9	I-RMC	I	Remote control signal input from the remote control signal receiver
10	O-3CD-M1–	O	CD spindle motor drive (–) signal output for the CD mechanism deck
11	O-3CD-M2+	O	CD sled motor drive (+) signal output for the CD mechanism deck
12	O-3CD-M2–	O	CD sled motor drive (–) signal output for the CD mechanism deck
13	X0A	I	Sub system clock signal input (32.768 kHz)
14	X1A	O	Sub system clock signal output (32.768 kHz)
15	VCC	—	Power supply pin (+3.3 V)
16	VSS	—	Ground
17	O-CD-CE	O	Chip enable signal output for the CD-MP3 processor
18	O-CD-CL	O	Clock signal output for the CD-MP3 processor
19	I-CD-DI	I	Serial data input from the CD-MP3 processor
20	O-CD-DO	O	Serial data output for the CD-MP3 processor
21	I-3CD-CHACK	I	Chucking switch detection signal input from the CD mechanism deck
22	I-3CD-STOCK	I	Stock switch detection signal input from the CD mechanism deck
23	O-CD-M-MUTE	O	CD motor drive ON/OFF mute control signal output for the CD motor/coil driver
24	O-CD-RST	O	System reset signal output for the CD-MP3 processor
25	O-DIMMER1	O	Volume LED dimmer control signal output
26	O-CD-ON	O	Digital power supply control signal output for the CD-MP3 processor
27	O-LED-VOL	O	Volume LED drive control signal output
28	O-LED-LCD	O	LCD back light LED drive control signal output
29	I-USB-TXD	I	USB TX signal input from the USB controller
30	O-TP_REC_MUTE	O	Tape REC mute signal output for the tape mechanism deck
31	O-USB-RXD	O	USB RX signal output for the USB controller
32	AVCC	—	Power supply pin (+3.3 V)
33	O-USB-SLEEP	O	Sleep control signal output for the USB controller
34	O-USB-RST	O	System reset signal output for the USB controller
35	AVSS	—	Ground
36	I-P-MONI	I	Power monitor signal input
37, 38	I-KEY1, I-KEY2	I	Front panel key signal input (A/D input)
39	I-TU-ANSD	I	Auto gain control signal input
40	I-5V/9V-DET	I	Power supply voltage detection signal input
41	I-KEY-WAKE-UP/VOL	I	Front panel key wake-up signal input/volume control signal input
42	I-HOLD	I	Micon stop mode control signal input
43	I-LEVEL	I	Audio level detection signal input
44	GND	—	Ground
45	I-3CD-CLOSE/OPEN	I	Disc tray close/open detection signal input from the CD mechanism deck
46	I-MODEL	I	Model setting pin
47	I-SUFFIX/TP-STATE	I	Destination setting pin/tape state detection signal input (HCD-EX6T/EX8T/EX9T)
48	I-TU-DO	I	Serial data input from the AM/FM DET
49	O-I2C-FUNC-DATA	O	Serial data output for the electrical volume
50	O-I2C-FUNC-CLK	O	Serial data transfer clock signal output for the electrical volume
51	MD2	—	Not used. (Fixed at L in this set)
52	MD1	—	Not used. (Connect to VDD)
53	MD0	—	Not used. (Fixed at H in this set)
54	I-RST	I	Reset signal input (L: reset)
55	O-TU-CE	O	Chip enable signal output for the AM/FM DET
56	O-TU-DI	O	Serial data output for the AM/FM DET
57	O-TU-CLK	O	Serial data transfer clock signal output for the AM/FM DET
58	VLCD	—	Terminal for doubler circuit capacitor connection to develop liquid crystal display panel drive voltage

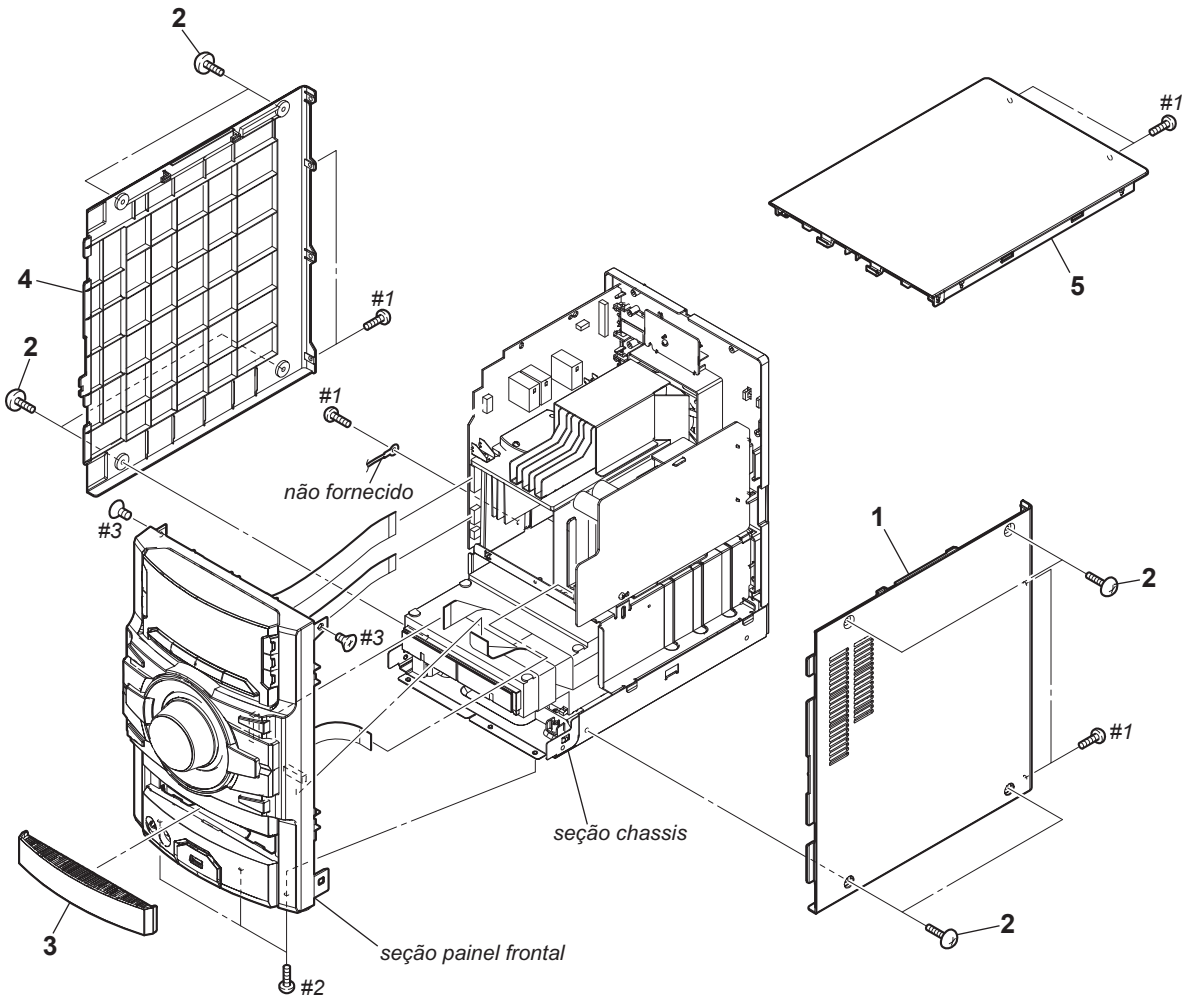
Pin No.	Pin Name	I/O	Description
59 to 62	COM0 to COM3	O	Common drive signal output for the liquid crystal display panel
63, 64	SEG0, SEG1	O	Segment drive signal output for the liquid crystal display panel
65	VCC	—	Power supply pin (+3.3 V)
66	VSS	—	Ground
67 to 89	SEG2 to SEG24	O	Segment drive signal output for the liquid crystal display panel
90	VCC	—	Power supply pin (+3.3 V)
91	VSS	—	Ground
92	X1	I	Main system clock signal input (6 MHz)
93	X0	O	Main system clock signal output (6 MHz)
94 to 100	SEG25 to SEG31	O	Segment drive signal output for the liquid crystal display panel

SEÇÃO 6
VISTA EXPLODIDAS

Note:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

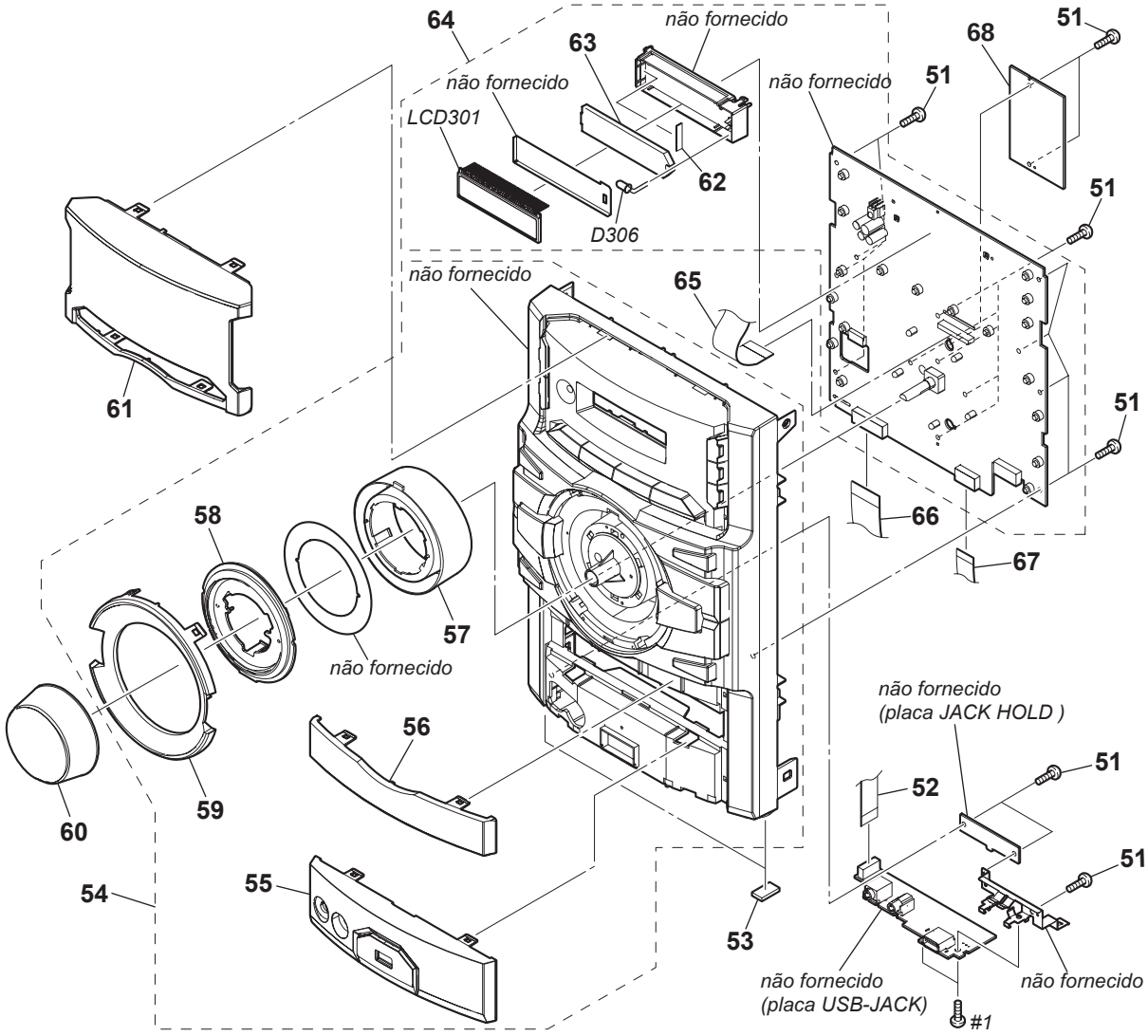
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

6-1. SEÇÃO GERAL



Ref. No.	Part No.	Description	Remark
1	4-165-543-71	TAMPA LATERAL (DIR)	
2	3-363-099-32	PARAFUSO (CASE 3 TP2)	
3	4-162-313-01	PAINEL DE CARREGAMENTO	
4	4-166-536-71	TAMPA LATERAL (ESQ)	
5	2-890-829-11	TAMPA SUPERIOR	
#1	7-685-647-79	PARAFUSO +BVTP 3X10 TYPE2 IT-3	
#2	7-685-872-01	PARAFUSO+BVTT 3X8 (S)	
#3	7-685-247-14	PARAFUSO +KTP 3X10 TYPE2 NON-SLIT	

6-2. SEÇÃO PAINEL FRONTAL

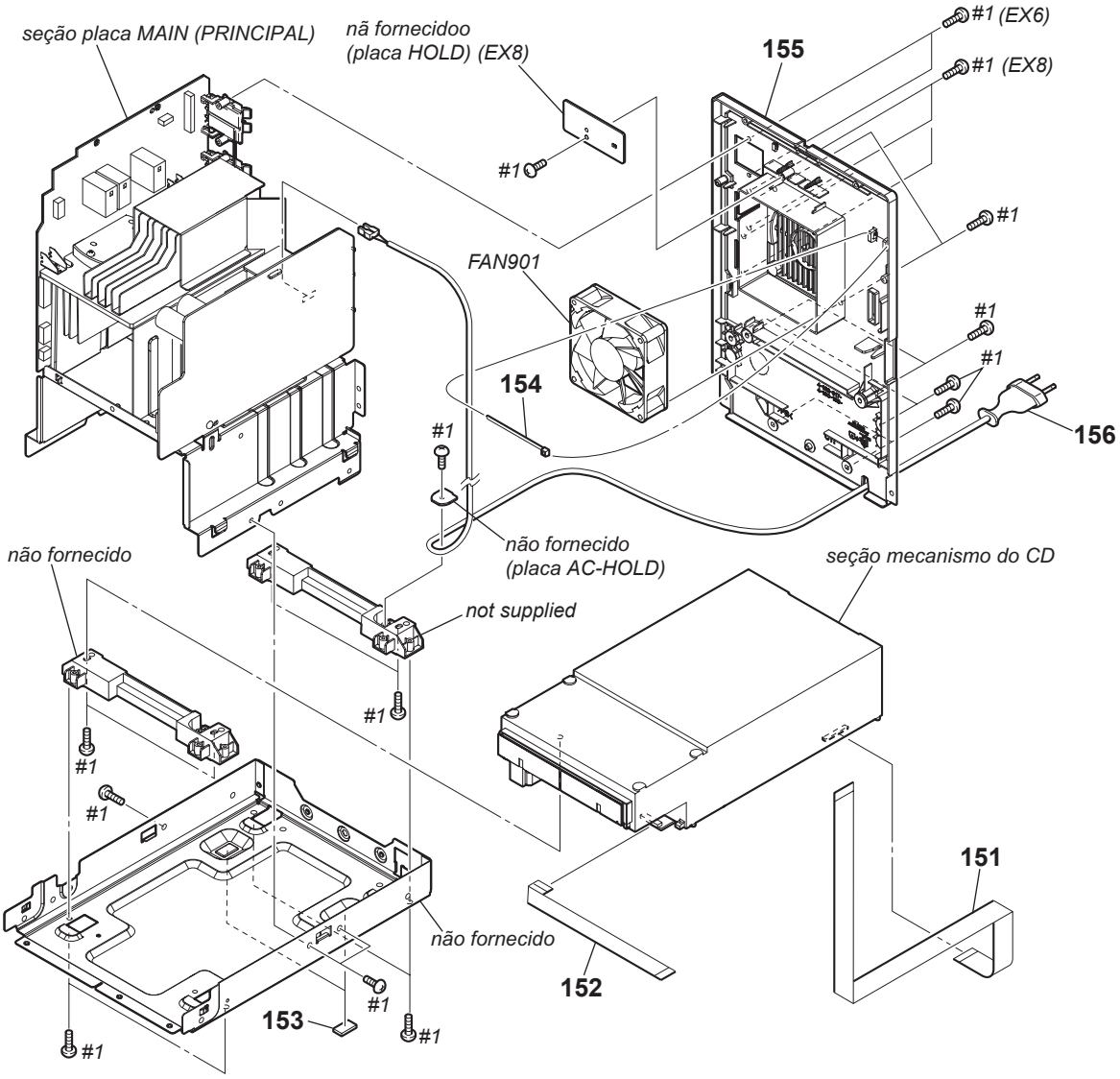


Note: If the wire (flat type) was replaced, fold it some as the wire (flat type) before replacement.

Ref. No.	Part No.	Description	Remark
51	3-087-053-01	+BVTP2.6 (3CR)	
52	1-832-817-21	CABO FLAT FLEXIVEL (9 VIAS)	
53	4-225-252-01	CALÇO PÉ	
54	Y-8287-235-A	PAINEL FRONTAL MONTADO (EX8)	
54	Y-8287-112-A	PAINEL FRONTAL MONTADO (EX6)	
55	4-162-315-01	PLACA ORNAMENTAL INFERIOR (EX8)	
55	4-162-315-11	PLACA ORNAMENTAL INFERIOR (EX6)	
56	4-162-314-01	PLACA ORNAMENTAL SUPERIOR	
57	4-162-311-01	REFLETOR	
58	4-162-310-01	ANEL DE VOLUME	
59	4-162-309-01	ANEL	
60	4-162-308-01	BOTÃO DE VOLUME (EX8)	
60	4-162-308-11	KNOB, VOL (EX6)	
61	4-162-300-71	VISOR (EX6)	
61	4-162-300-61	VISOR (EX8)	
62	2-665-175-01	FOLHA REFLETOR	

Ref. No.	Part No.	Description	Remark
63	2-649-178-01	PLACA GUIA DE LUZ	
64	Y-8287-109-A	PLACA PAINEL MONTADA (EX6)	
64	Y-8287-153-A	PLACA PAINEL MONTADA (EX8)	
65	1-832-634-21	CABO FLAT FLEXIVEL (25 VIAS)	
66	1-838-042-21	CABO FLAT FLEXIVEL (19 VIAS)	
67	1-831-928-21	CABO FLAT FLEXIVEL (11 VIAS)	
D306	6-503-056-01	LED 1L0341Y23E0CA602-II (LCD BACK LIGHT)	
LCD301	1-811-042-11	DISPLAY DE CRISTAL LÍQUIDO	
#1	7-685-647-79	PARAFUSO +BVTP 3X10 TYPE2 IT-3	

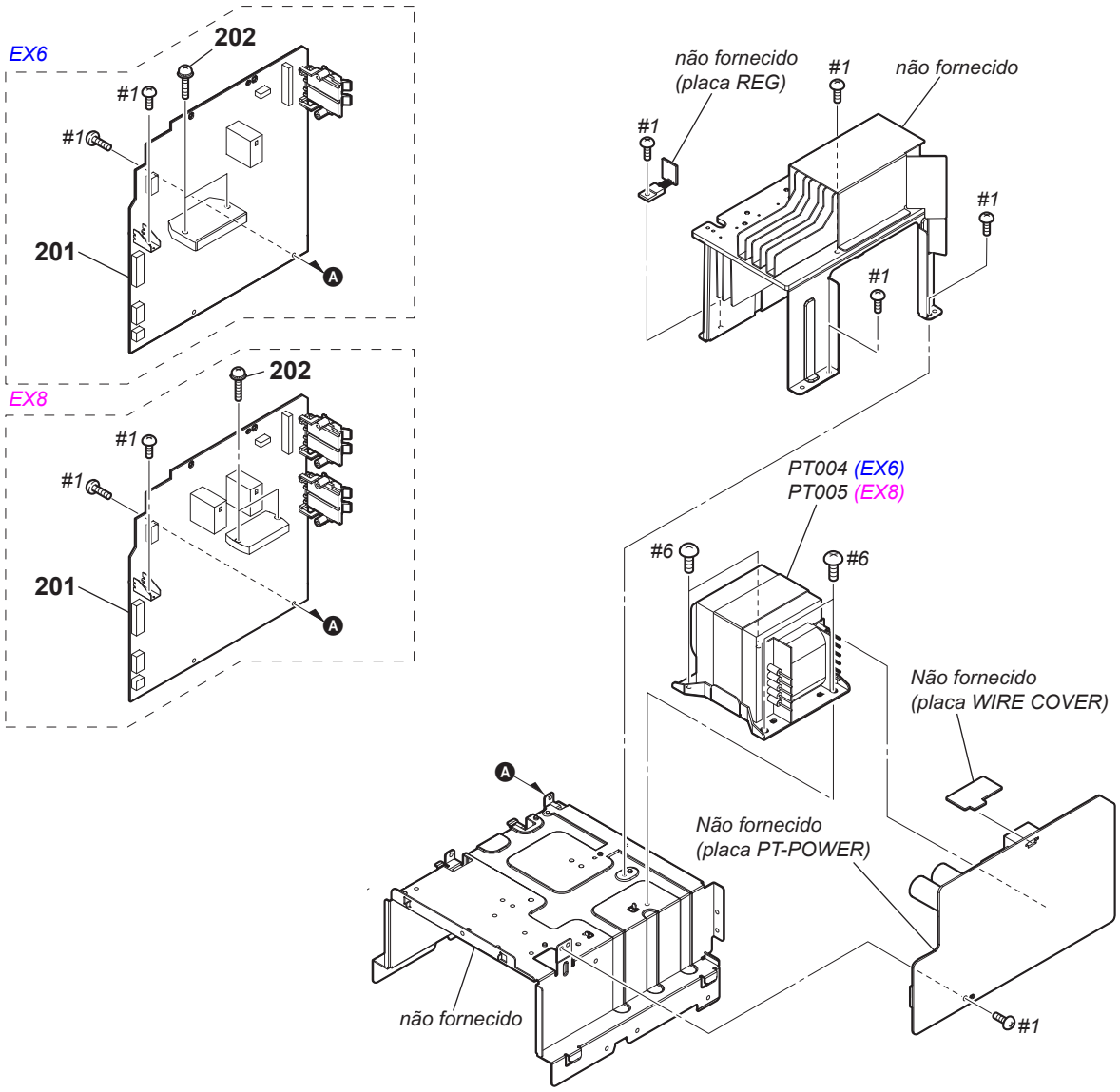
6-3 SEÇÃO CHASSIS



Note: If the wire (flat type) was replaced, fold it some as the wire (flat type) before replacement.

Ref. No.	Part No.	Description	Remark
151	1-838-040-21	CABO FLAT FLEXIVEL (25 VIAS)	
152	1-832-837-21	CABO FLAT FLEXIVEL (13 VIAS)	
153	4-225-252-01	CALÇO PÉ	
154	4-147-421-01	PRESILHA DO FIO	
155	4-180-185-81	PAINEL TRASEIRO (EX8)	
155	4-180-185-71	PAINEL TRASEIRO (EX6)	

Ref. No.	Part No.	Description	Remark
⚠ 156	1-835-706-21	CABO DE FORÇA	
FAN901	1-787-344-11	VENTILADOR	
#1	7-685-647-79	PARAFUSO +BVTP 3X10 TYPE2 IT-3	

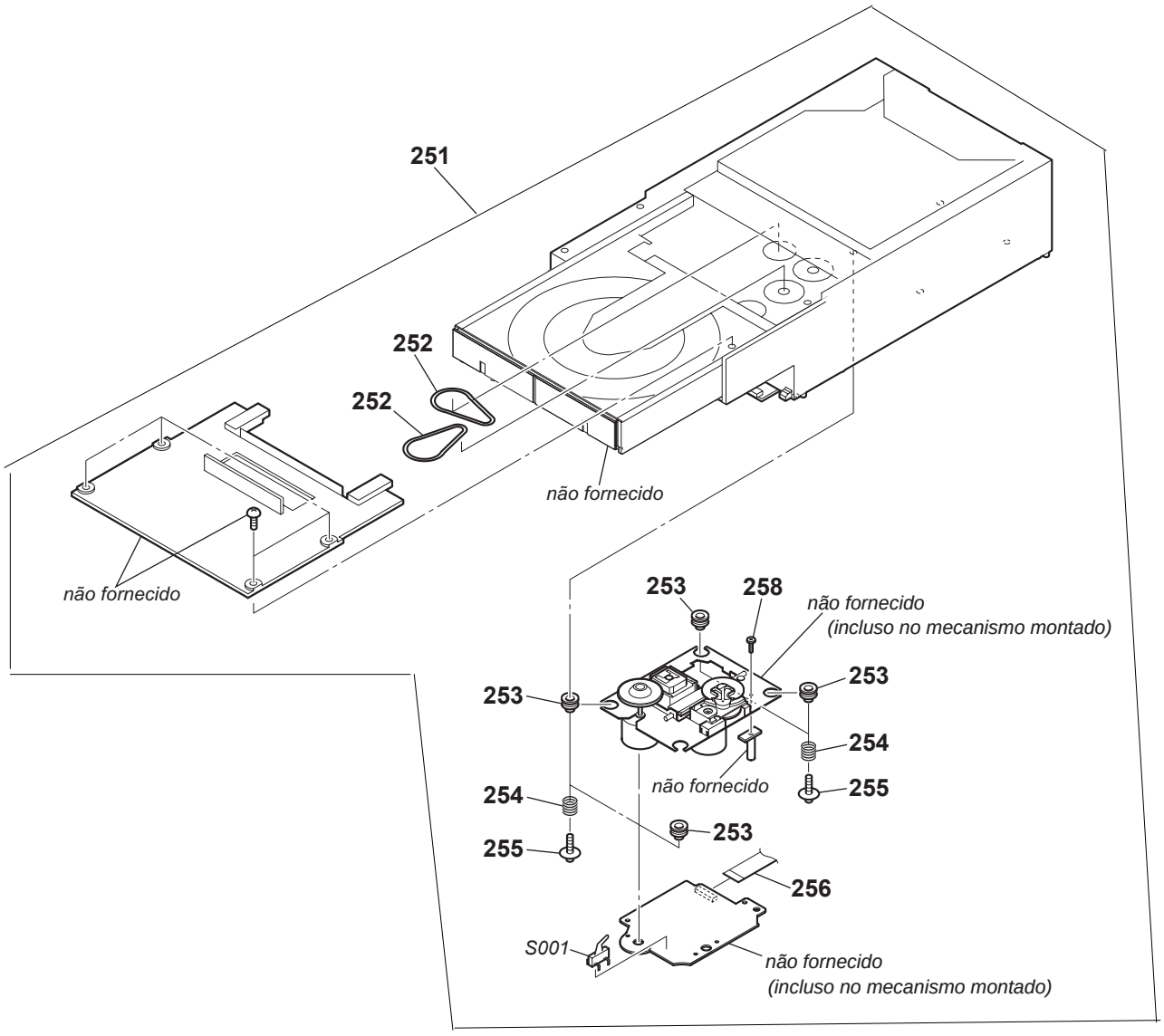


Ref. No.	Part No.	Description	Remark
201	Y-8287-107-A	PLACA MAIN-AMP MONTADA (EX6)	
201	Y-8287-137-A	PLACA MAIN-AMP MONTADA (EX8)	
202	3-905-609-31	PARAFUSO (TRANSISTOR)	

Ref. No.	Part No.	Description	Remark
⚠ PT004	1-445-868-11	TRANSFORMADOR DE FORÇA (MAIN) (EX6)	
⚠ PT005	1-445-869-11	TRANSFORMADOR DE FORÇA (MAIN) (EX8)	
#1	7-685-647-79	PARAFUSO +BVTP 3X10 TYPE2 IT-3	
#6	7-685-880-09	PARAFUSO +BVTT 4X6 (S)	

Ver. 1.1 10.2010

6-5. SEÇÃO MECANISMO DO CD (CDM88CL-D1BD74UR)



Nota: O bloco de Unidade Óptica e a Placa BD74 não será fornecida separadamente.
Caso de defeito solicite mecanismo completo.

Ref. No.	Part No.	Description	Remark
251	A-1768-164-A	MECANISMO DO CD COM UNIDADE ÓPTICA	
252	2-632-062-11	CORREIA (DLM3A)	
253	4-227-549-31	AMORTECEDOR	
254	4-227-045-31	MOLA ESPIRAL (AMORTECEDOR)	
255	4-985-672-01	PARAFUSO FLUTUANTE (+PTPWHM2.6)	
256	1-834-268-21	CABO TIPO FLAT(16 VIAS)	
258	3-080-204-31	PARAFUSO, TAPPING, P2	
S001	1-771-853-11	CHAVE, DETECTION (LIMIT)	

BD74

SEÇÃO 7
LISTA DE PEÇAS ELÉTRICAS

Note:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS
  uF: µF
- COILS
  uH: µH
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . , uPA. . , µPA. . ,
  uPB. . : µPB. . , uPC. . , µPC. . ,
  uPD. . : µPD. .

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remark
	A-1748-699-A	PLACA BD74 MONTADA			
		**********			
		< CAPACITOR >			
C101	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C102	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C103	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C104	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C105	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C106	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C107	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C108	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C110	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C111	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C112	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C113	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C116	1-128-995-21	ELECT CHIP	100uF	20%	10V
C117	1-100-756-91	CERAMIC CHIP	0.047uF	10%	50V
C118	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C119	1-128-995-21	ELECT CHIP	100uF	20%	10V
C120	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C121	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C122	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C123	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C124	1-128-995-21	ELECT CHIP	100uF	20%	10V
C125	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C126	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C127	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C128	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C129	1-128-995-21	ELECT CHIP	100uF	20%	10V
C130	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C131	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C132	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C133	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C201	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C203	1-137-710-91	CERAMIC CHIP	10uF	20%	6.3V
C205	1-137-710-91	CERAMIC CHIP	10uF	20%	6.3V
C206	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C207	1-128-995-21	ELECT CHIP	100uF	20%	10V
C208	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C209	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C301	1-128-394-11	ELECT CHIP	220uF	20%	10V
C302	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C303	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C304	1-164-156-11	CERAMIC CHIP	0.1uF		25V

Ref. No.	Part No.	Description			Remark
C401	1-128-995-21	ELECT CHIP	100uF	20%	10V
C402	1-128-995-21	ELECT CHIP	100uF	20%	10V
C403	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C404	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C406	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C407	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C413	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C414	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C418	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
		< CONNECTOR >			
CN201	1-770-425-51	CONNECTOR, FFC/FPC 16P			
CN403	1-784-875-51	CONNECTOR, FFC (LIF (NON-ZIF)) 25P			
		< IC >			
IC101	6-713-623-01	IC LC786950T-US-H			
IC301	6-710-637-01	IC BA5826HFP-E2			
		< TRANSISTOR >			
Q201	6-551-120-01	TRANSISTOR 2SA2119K			
		< RESISTOR >			
R101	1-216-815-11	METAL CHIP	330	5%	1/10W
R102	1-216-833-11	METAL CHIP	10K	5%	1/10W
R103	1-216-864-11	SHORT CHIP	0		
R104	1-216-864-11	SHORT CHIP	0		
R105	1-216-864-11	SHORT CHIP	0		
R106	1-216-864-11	SHORT CHIP	0		
R107	1-216-843-11	METAL CHIP	68K	5%	1/10W
R108	1-216-821-11	METAL CHIP	1K	5%	1/10W
R109	1-216-821-11	METAL CHIP	1K	5%	1/10W
R111	1-216-837-11	METAL CHIP	22K	5%	1/10W
R112	1-216-864-11	SHORT CHIP	0		
R113	1-216-819-11	METAL CHIP	680	5%	1/10W
R114	1-216-819-11	METAL CHIP	680	5%	1/10W
R116	1-216-843-11	METAL CHIP	68K	5%	1/10W
R117	1-216-833-11	METAL CHIP	10K	5%	1/10W
R118	1-216-809-11	METAL CHIP	100	5%	1/10W
R120	1-216-833-11	METAL CHIP	10K	5%	1/10W
R121	1-216-833-11	METAL CHIP	10K	5%	1/10W
R122	1-216-833-11	METAL CHIP	10K	5%	1/10W
R123	1-216-833-11	METAL CHIP	10K	5%	1/10W
R124	1-216-833-11	METAL CHIP	10K	5%	1/10W
R126	1-216-864-11	SHORT CHIP	0		
R129	1-216-809-11	METAL CHIP	100	5%	1/10W

Ref. No.	Part No.	Description			Remark
R131	1-216-295-91	SHORT CHIP	0		
R201	1-218-446-11	METAL CHIP	1	5%	1/10W
R202	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R203	1-216-864-11	SHORT CHIP	0		
R301	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R302	1-216-839-11	METAL CHIP	33K	5%	1/10W
R303	1-216-834-11	METAL CHIP	12K	5%	1/10W
R304	1-216-833-11	METAL CHIP	10K	5%	1/10W
R305	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R401	1-216-295-91	SHORT CHIP	0		
R402	1-216-295-91	SHORT CHIP	0		
R403	1-216-809-11	METAL CHIP	100	5%	1/10W
R404	1-216-809-11	METAL CHIP	100	5%	1/10W
R405	1-216-809-11	METAL CHIP	100	5%	1/10W
R406	1-216-809-11	METAL CHIP	100	5%	1/10W
R407	1-216-809-11	METAL CHIP	100	5%	1/10W
R408	1-216-809-11	METAL CHIP	100	5%	1/10W
R409	1-216-809-11	METAL CHIP	100	5%	1/10W
R411	1-216-809-11	METAL CHIP	100	5%	1/10W
R412	1-216-809-11	METAL CHIP	100	5%	1/10W
R413	1-216-809-11	METAL CHIP	100	5%	1/10W
R414	1-216-809-11	METAL CHIP	100	5%	1/10W
R415	1-216-809-11	METAL CHIP	100	5%	1/10W
R416	1-216-809-11	METAL CHIP	100	5%	1/10W
R417	1-216-295-91	SHORT CHIP	0		
		< VIBRATOR >			
X101	1-795-101-21	VIBRATOR, CERAMIC (16.934MHz)			

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MAIN-AMP

Ref. No.	Part No.	Description				Remark
	Y-8287-107-A	PLACA MAIN-AMP MONTADA (EX6)				
	Y-8287-137-A	PLACA MAIN-AMP MONTADA (EX8)				
		**********				
		< CAPACITOR >				
C101	1-126-960-11	ELECT	1uF	20%	50V	(EX8)
C102	1-126-960-11	ELECT	1uF	20%	50V	(EX8)
C103	1-164-315-11	CERAMIC CHIP	470PF	5%	50V	(EX8)
C104	1-164-315-11	CERAMIC CHIP	470PF	5%	50V	(EX8)
C105	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	(EX8)
C106	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	(EX8)
C111	1-162-908-11	CERAMIC CHIP	3PF	0.25PF	50V	(EX8)
C112	1-162-908-11	CERAMIC CHIP	3PF	0.25PF	50V	(EX8)
C113	1-126-947-11	ELECT	47uF	20%	35V	(EX8)
C114	1-126-947-11	ELECT	47uF	20%	35V	(EX8)
C121	1-126-960-11	ELECT	1uF	20%	50V	(EX8)
C122	1-126-960-11	ELECT	1uF	20%	50V	(EX8)
C123	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V	(EX8)
C124	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V	(EX8)
C125	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	(EX8)
C126	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	(EX8)
C131	1-162-908-11	CERAMIC CHIP	3PF	0.25PF	50V	(EX8)
C132	1-162-908-11	CERAMIC CHIP	3PF	0.25PF	50V	(EX8)
C133	1-126-947-11	ELECT	47uF	20%	35V	(EX8)
C134	1-126-947-11	ELECT	47uF	20%	35V	(EX8)
C141	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V	(EX8)
C142	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V	(EX8)
C151	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V	(EX8)
C152	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V	(EX8)
C161	1-165-621-91	CERAMIC CHIP	0.1uF		50V	(EX8)
C162	1-165-621-91	CERAMIC CHIP	0.1uF		50V	(EX8)
C163	1-165-621-91	CERAMIC CHIP	0.1uF		50V	(EX8)
C164	1-165-621-91	CERAMIC CHIP	0.1uF		50V	(EX8)
C165	1-126-964-11	ELECT	10uF	20%	50V	(EX8)
C166	1-126-964-11	ELECT	10uF	20%	50V	(EX8)
C167	1-126-969-11	ELECT	220uF	20%	50V	(EX8)
C168	1-126-969-11	ELECT	220uF	20%	50V	(EX8)
C181	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	
C182	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C190	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	(EX8)
C191	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	(EX8)
C193	1-126-965-91	ELECT	22uF	20%	50V	
C201	1-126-960-11	ELECT	1uF	20%	50V	(EX6)
C205	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	(EX6)

Ref. No.	Part No.	Description				Remark
C211	1-162-908-11	CERAMIC CHIP	3PF	0.25PF	50V	(EX6)
C213	1-126-947-11	ELECT	47uF	20%	35V	(EX6)
C221	1-126-960-11	ELECT	1uF	20%	50V	(EX6)
C223	1-164-315-11	CERAMIC CHIP	470PF	5%	50V	(EX6)
C225	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	(EX6)
C231	1-162-908-11	CERAMIC CHIP	3PF	0.25PF	50V	(EX6)
C233	1-126-947-11	ELECT	47uF	20%	35V	(EX6)
C241	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V	(EX6)
C251	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V	(EX6)
C261	1-165-621-91	CERAMIC CHIP	0.1uF		50V	(EX6)
C262	1-165-621-91	CERAMIC CHIP	0.1uF		50V	(EX6)
C263	1-165-621-91	CERAMIC CHIP	0.1uF		50V	(EX6)
C264	1-165-621-91	CERAMIC CHIP	0.1uF		50V	(EX6)
C267	1-126-968-11	ELECT	100uF	20%	50V	(EX6)
C268	1-126-968-11	ELECT	100uF	20%	50V	(EX6)
C290	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	(EX6)
C291	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	(EX6)
C600	1-126-933-11	ELECT	100uF	20%	16V	
C601	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V	
C602	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V	
C603	1-162-960-11	CERAMIC CHIP	220PF	10%	50V	
C604	1-162-960-11	CERAMIC CHIP	220PF	10%	50V	
C605	1-126-960-11	ELECT	1uF	20%	50V	
C606	1-126-960-11	ELECT	1uF	20%	50V	
C607	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C608	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C609	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V	
C610	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V	
C611	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C612	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	

Ref. No.	Part No.	Description				Remark
C617	1-126-960-11	ELECT	1uF	20%	50V	
C618	1-126-960-11	ELECT	1uF	20%	50V	
C621	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V	(EX6)
C621	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	(EX8)
C622	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V	(EX6)
C622	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	(EX8)
C623	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V	
C624	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V	
C625	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V	
C626	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V	
C630	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V	
C631	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	(EX8)
C631	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V	(EX6)
C632	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	(EX8)
C632	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V	(EX6)
C633	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V	
C634	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V	
C635	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	(EX6)
C636	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	(EX6)
C637	1-126-960-11	ELECT	1uF	20%	50V	
C638	1-126-960-11	ELECT	1uF	20%	50V	
C641	1-162-962-11	CERAMIC CHIP	470PF	10%	50V	
C642	1-126-933-11	ELECT	100uF	20%	16V	(EX8)
C642	1-126-934-11	ELECT	220uF	20%	16V	(EX6)
C643	1-126-964-11	ELECT	10uF	20%	50V	
C644	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C645	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V	

MAIN-AMP

Ref. No.	Part No.	Description			Remark
C671	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C673	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C674	1-126-961-11	ELECT	2.2uF	20%	50V
C701	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C702	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C703	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C704	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C705	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C706	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C711	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V(EX8)
C712	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V(EX8)
C713	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V(EX8)
C714	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V(EX8)
C715	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V(EX8)
C716	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V(EX8)
C731	1-126-963-11	ELECT	4.7uF	20%	50V
C732	1-126-964-11	ELECT	10uF	20%	50V
C742	1-126-923-91	ELECT	220uF	20%	10V
C771	1-126-960-11	ELECT	1uF	20%	50V
C773	1-126-933-11	ELECT	100uF	20%	16V
C776	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C810	1-126-925-91	ELECT	470uF	20%	10V
C811	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C812	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C813	1-126-963-11	ELECT	4.7uF	20%	50V
C814	1-126-960-11	ELECT	1uF	20%	50V
C815	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C816	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C820	1-126-965-91	ELECT	22uF	20%	50V
C821	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C822	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
		< CONNECTOR >			
CN603	1-784-741-11	CONNECTOR, FFC 19P			
CN604	1-784-731-11	CONNECTOR, FFC 9P			
CN609	1-815-551-11	PIN, CONNECTOR (PWB) 3P			
CN701	1-819-131-11	PIN, CONNECTOR 3P			
* CN801	1-506-680-11	PLUG, CONNECTOR (2.5mm) 3P			(ANTENNA FM/AM)
		< DIODE >			
D140	6-501-817-01	DIODE MA2J1110GLS0 (EX8)			
D141	6-500-335-01	DIODE MC2838-T112-1 (EX8)			
D152	6-500-335-01	DIODE MC2838-T112-1 (EX8)			
D190	6-501-817-01	DIODE MA2J1110GLS0			
D240	6-501-817-01	DIODE MA2J1110GLS0 (EX6)			
D241	6-500-335-01	DIODE MC2838-T112-1 (EX6)			
D671	6-500-848-01	DIODE MC2840-T112-1			

Ref. No.	Part No.	Description	Remark
D701	6-501-817-01	DIODE MA2J1110GLS0	
D711	6-501-817-01	DIODE MA2J1110GLS0 (EX8)	
D730	6-500-335-01	DIODE MC2838-T112-1	
D731	6-501-722-01	DIODE MAZ8043GMLS0	
D732	6-501-729-01	DIODE MAZ8051GLLS0	
D733	6-501-729-01	DIODE MAZ8051GLLS0	
D734	6-501-817-01	DIODE MA2J1110GLS0	
D751	6-501-817-01	DIODE MA2J1110GLS0	
D801	6-500-848-01	DIODE MC2840-T112-1	
D802	6-500-848-01	DIODE MC2840-T112-1	
		< BPF >	
FL801	1-236-711-21	FILTER, BAND PASS	
		< IC >	
IC102	6-600-731-01	IC STK433-870-E (EX8)	
IC202	6-705-620-01	IC STK433-060 (EX6)	
IC601	6-713-384-01	IC BD3491FS-SE2	
IC801	6-714-822-01	IC LV23401V-TLM-H	
		< JUMPER RESISTOR >	
JR701	1-216-864-11	SHORT CHIP 0	
		< COIL >	
L701	1-456-107-11	COIL, AIR-CORE	
L702	1-456-107-11	COIL, AIR-CORE	
L801	1-481-550-21	INDUCTOR 39nH	
L802	1-481-550-21	INDUCTOR 39nH	
L803	1-457-757-11	COIL, AM ANTENNA	
		< TRANSISTOR >	
Q141	6-551-270-01	TRANSISTOR 2SA2026 (EX8)	
Q142	6-551-270-01	TRANSISTOR 2SA2026 (EX8)	
Q151	6-551-270-01	TRANSISTOR 2SA2026 (EX8)	
Q152	6-551-270-01	TRANSISTOR 2SA2026 (EX8)	
Q181	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q182	6-551-696-01	TRANSISTOR ISA1235AC1TP-1EF	
Q190	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q241	6-551-270-01	TRANSISTOR 2SA2026 (EX6)	
Q251	6-551-270-01	TRANSISTOR 2SA2026 (EX6)	
Q671	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q672	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q731	8-729-037-03	TRANSISTOR KTA1266GR-AT	
Q732	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q741	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q751	8-729-120-28	TRANSISTOR 2SC1623-L5L6	

Ref. No.	Part No.	Description			Remark
Q755	8-729-120-28	TRANSISTOR 2SC1623-L5L6 (EX8)			
Q756	6-551-696-01	TRANSISTOR ISA1235AC1TP-1EF (EX8)			
Q770	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q771	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q772	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
		< RESISTOR >			
R101	1-216-830-11	METAL CHIP	5.6K	5%	1/10W(EX8)
R102	1-216-830-11	METAL CHIP	5.6K	5%	1/10W(EX8)
R103	1-216-833-11	METAL CHIP	10K	5%	1/10W(EX8)
R104	1-216-833-11	METAL CHIP	10K	5%	1/10W(EX8)
R105	1-216-841-11	METAL CHIP	47K	5%	1/10W(EX8)
R106	1-216-841-11	METAL CHIP	47K	5%	1/10W(EX8)
R107	1-216-817-11	METAL CHIP	470	5%	1/10W(EX8)
R108	1-216-817-11	METAL CHIP	470	5%	1/10W(EX8)
⚠ R109	1-215-890-11	METAL OXIDE	470	5%	2W F
⚠ R110	1-215-890-11	METAL OXIDE	470	5%	2W F
R111	1-216-841-11	METAL CHIP	47K	5%	1/10W(EX8)
R112	1-216-841-11	METAL CHIP	47K	5%	1/10W(EX8)
R113	1-216-823-11	METAL CHIP	1.5K	5%	1/10W(EX8)
R114	1-216-823-11	METAL CHIP	1.5K	5%	1/10W(EX8)
⚠ R115	1-216-361-31	METAL OXIDE	0.22	5%	2W (EX8)
⚠ R116	1-216-361-31	METAL OXIDE	0.22	5%	2W (EX8)
R117	1-249-401-11	CARBON	47	5%	1/4W
R118	1-249-401-11	CARBON	47	5%	1/4W
R121	1-216-830-11	METAL CHIP	5.6K	5%	1/10W(EX8)
R122	1-216-830-11	METAL CHIP	5.6K	5%	1/10W(EX8)
R123	1-216-833-11	METAL CHIP	10K	5%	1/10W(EX8)
R124	1-216-833-11	METAL CHIP	10K	5%	1/10W(EX8)
R125	1-216-841-11	METAL CHIP	47K	5%	1/10W(EX8)
R126	1-216-841-11	METAL CHIP	47K	5%	1/10W(EX8)
R127	1-216-817-11	METAL CHIP	470	5%	1/10W(EX8)
R128	1-216-817-11	METAL CHIP	470	5%	1/10W(EX8)
R131	1-216-841-11	METAL CHIP	47K	5%	1/10W(EX8)
R132	1-216-841-11	METAL CHIP	47K	5%	1/10W(EX8)

Ref. No.	Part No.	Description			Remark
R133	1-216-823-11	METAL CHIP	1.5K	5%	1/10W(EX8)
R134	1-216-823-11	METAL CHIP	1.5K	5%	1/10W(EX8)
⚠ R135	1-216-361-31	METAL OXIDE	0.22	5%	2W (EX8)
⚠ R136	1-216-361-31	METAL OXIDE	0.22	5%	2W (EX8)
R141	1-216-822-11	METAL CHIP	1.2K	5%	1/10W(EX8)
R142	1-216-822-11	METAL CHIP	1.2K	5%	1/10W(EX8)
R143	1-216-837-11	METAL CHIP	22K	5%	1/10W(EX8)
R144	1-216-837-11	METAL CHIP	22K	5%	1/10W(EX8)
R145	1-216-825-11	METAL CHIP	2.2K	5%	1/10W(EX8)
R146	1-216-825-11	METAL CHIP	2.2K	5%	1/10W(EX8)
R151	1-216-822-11	METAL CHIP	1.2K	5%	1/10W(EX8)
R152	1-216-822-11	METAL CHIP	1.2K	5%	1/10W(EX8)
R153	1-216-837-11	METAL CHIP	22K	5%	1/10W(EX8)
R154	1-216-837-11	METAL CHIP	22K	5%	1/10W(EX8)
R155	1-216-825-11	METAL CHIP	2.2K	5%	1/10W(EX8)
R156	1-216-825-11	METAL CHIP	2.2K	5%	1/10W(EX8)
R161	1-216-813-11	METAL CHIP	220	5%	1/10W(EX8)
R162	1-216-813-11	METAL CHIP	220	5%	1/10W(EX8)
R163	1-216-813-11	METAL CHIP	220	5%	1/10W(EX8)
R164	1-216-813-11	METAL CHIP	220	5%	1/10W(EX8)
R165	1-216-813-11	METAL CHIP	220	5%	1/10W(EX8)
R166	1-216-813-11	METAL CHIP	220	5%	1/10W(EX8)
R167	1-216-813-11	METAL CHIP	220	5%	1/10W(EX8)
R168	1-216-813-11	METAL CHIP	220	5%	1/10W(EX8)
R181	1-216-845-11	METAL CHIP	100K	5%	1/10W
R182	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R183	1-216-833-11	METAL CHIP	10K	5%	1/10W
R184	1-216-833-11	METAL CHIP	10K	5%	1/10W
R190	1-216-821-11	METAL CHIP	1K	5%	1/10W(EX8)
R191	1-216-809-11	METAL CHIP	100	5%	1/10W(EX8)
R192	1-216-833-11	METAL CHIP	10K	5%	1/10W
R193	1-216-821-11	METAL CHIP	1K	5%	1/10W
R194	1-216-841-11	METAL CHIP	47K	5%	1/10W
R201	1-216-824-11	METAL CHIP	1.8K	5%	1/10W(EX6)

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Ref. No.	Part No.	Description			Remark
R203	1-216-825-11	METAL CHIP	2.2K	5%	1/10W(EX6)
R205	1-216-841-11	METAL CHIP	47K	5%	1/10W(EX6)
R207	1-216-817-11	METAL CHIP	470	5%	1/10W(EX6)
R210	1-216-864-11	SHORT CHIP	0 (EX6)		
R211	1-216-841-11	METAL CHIP	47K	5%	1/10W(EX6)
R213	1-216-823-11	METAL CHIP	1.5K	5%	1/10W(EX6)
⚠ R215	1-216-361-31	METAL OXIDE	0.22	5%	2W (EX6)
R221	1-216-824-11	METAL CHIP	1.8K	5%	1/10W(EX6)
R223	1-216-825-11	METAL CHIP	2.2K	5%	1/10W(EX6)
R225	1-216-841-11	METAL CHIP	47K	5%	1/10W(EX6)
R227	1-216-817-11	METAL CHIP	470	5%	1/10W(EX6)
R231	1-216-841-11	METAL CHIP	47K	5%	1/10W(EX6)
R233	1-216-823-11	METAL CHIP	1.5K	5%	1/10W(EX6)
⚠ R236	1-216-361-31	METAL OXIDE	0.22	5%	2W (EX6)
R241	1-216-822-11	METAL CHIP	1.2K	5%	1/10W(EX6)
R243	1-216-837-11	METAL CHIP	22K	5%	1/10W(EX6)
R245	1-216-825-11	METAL CHIP	2.2K	5%	1/10W(EX6)
R251	1-216-822-11	METAL CHIP	1.2K	5%	1/10W(EX6)

Ref. No.	Part No.	Description			Remark
R253	1-216-837-11	METAL CHIP	22K	5%	1/10W(EX6)
R255	1-216-825-11	METAL CHIP	2.2K	5%	1/10W(EX6)
R261	1-216-813-11	METAL CHIP	220	5%	1/10W(EX6)
R262	1-216-813-11	METAL CHIP	220	5%	1/10W(EX6)
R263	1-216-813-11	METAL CHIP	220	5%	1/10W(EX6)
R264	1-216-813-11	METAL CHIP	220	5%	1/10W(EX6)
R290	1-216-821-11	METAL CHIP	1K	5%	1/10W(EX6)
R291	1-216-809-11	METAL CHIP	100	5%	1/10W(EX6)
R601	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R602	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R605	1-216-864-11	SHORT CHIP	0		
R606	1-216-864-11	SHORT CHIP	0		
R609	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R610	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R611	1-216-837-11	METAL CHIP	22K	5%	1/10W
R612	1-216-837-11	METAL CHIP	22K	5%	1/10W
R621	1-216-835-11	METAL CHIP	15K	5%	1/10W
R622	1-216-835-11	METAL CHIP	15K	5%	1/10W
R623	1-216-837-11	METAL CHIP	22K	5%	1/10W
R624	1-216-837-11	METAL CHIP	22K	5%	1/10W
R631	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R632	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R633	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R634	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R635	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R636	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R637	1-216-809-11	METAL CHIP	100	5%	1/10W
R638	1-216-809-11	METAL CHIP	100	5%	1/10W
R641	1-216-809-11	METAL CHIP	100	5%	1/10W
R642	1-216-813-11	METAL CHIP	220	5%	1/10W
R643	1-216-813-11	METAL CHIP	220	5%	1/10W

Ref. No.	Part No.	Description			Remark
R671	1-216-837-11	METAL CHIP	22K	5%	1/10W
R672	1-216-837-11	METAL CHIP	22K	5%	1/10W
R673	1-216-845-11	METAL CHIP	100K	5%	1/10W
R674	1-216-841-11	METAL CHIP	47K	5%	1/10W
R675	1-216-821-11	METAL CHIP	1K	5%	1/10W
R676	1-216-845-11	METAL CHIP	100K	5%	1/10W
R678	1-216-821-11	METAL CHIP	1K	5%	1/10W
R679	1-216-841-11	METAL CHIP	47K	5%	1/10W
R680	1-216-821-11	METAL CHIP	1K	5%	1/10W
R681	1-216-864-11	SHORT CHIP	0		
R682	1-216-817-11	METAL CHIP	470	5%	1/10W
R701	1-249-401-11	CARBON	47	5%	1/4W
R702	1-249-401-11	CARBON	47	5%	1/4W
R703	1-249-401-11	CARBON	47	5%	1/4W(EX6)
R703	1-247-791-91	CARBON	22	5%	1/4W(EX8)
R705	1-216-797-11	METAL CHIP	10	5%	1/10W
R706	1-216-797-11	METAL CHIP	10	5%	1/10W
R707	1-216-797-11	METAL CHIP	10	5%	1/10W
R708	1-216-797-11	METAL CHIP	10	5%	1/10W
R709	1-216-845-11	METAL CHIP	100K	5%	1/10W
R710	1-216-845-11	METAL CHIP	100K	5%	1/10W
R711	1-249-401-11	CARBON	47	5%	1/4W(EX8)
R712	1-249-401-11	CARBON	47	5%	1/4W(EX8)
R713	1-247-791-91	CARBON	22	5%	1/4W(EX8)

Ref. No.	Part No.	Description			Remark
R715	1-216-797-11	METAL CHIP	10	5%	1/10W(EX8)
R716	1-216-797-11	METAL CHIP	10	5%	1/10W(EX8)
R719	1-216-845-11	METAL CHIP	100K	5%	1/10W(EX8)
R720	1-216-845-11	METAL CHIP	100K	5%	1/10W(EX8)
R731	1-249-395-11	CARBON	15	5%	1/4W
R732	1-249-395-11	CARBON	15	5%	1/4W
R733	1-249-395-11	CARBON	15	5%	1/4W
R734	1-216-841-11	METAL CHIP	47K	5%	1/10W
R735	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R736	1-216-833-11	METAL CHIP	10K	5%	1/10W
R737	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R738	1-216-817-11	METAL CHIP	470	5%	1/10W
R744	1-216-837-11	METAL CHIP	22K	5%	1/10W
R745	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R746	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R747	1-216-837-11	METAL CHIP	22K	5%	1/10W
R749	1-216-833-11	METAL CHIP	10K	5%	1/10W
R750	1-216-864-11	SHORT CHIP	0 (EX6)		
R751	1-216-821-11	METAL CHIP	1K	5%	1/10W
R752	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R753	1-216-833-11	METAL CHIP	10K	5%	1/10W

MAIN-AMP **PANEL**

Ref. No.	Part No.	Description			Remark
R764	1-216-833-11	METAL CHIP	10K	5%	1/10W(EX8)
R765	1-216-833-11	METAL CHIP	10K	5%	1/10W(EX8)
R766	1-216-833-11	METAL CHIP	10K	5%	1/10W(EX8)
R767	1-216-833-11	METAL CHIP	10K	5%	1/10W(EX8)
R768	1-216-821-91	METAL CHIP	1K	5%	1/10W(EX8)
R770	1-216-801-11	METAL CHIP	22	5%	1/10W
R771	1-216-801-11	METAL CHIP	22	5%	1/10W
R772	1-216-834-11	METAL CHIP	12K	5%	1/10W
R773	1-216-849-11	METAL CHIP	220K	5%	1/10W
R774	1-216-833-11	METAL CHIP	10K	5%	1/10W
R775	1-216-849-11	METAL CHIP	220K	5%	1/10W
R776	1-216-841-11	METAL CHIP	47K	5%	1/10W
R801	1-216-821-11	METAL CHIP	1K	5%	1/10W
R802	1-216-821-11	METAL CHIP	1K	5%	1/10W
R803	1-216-821-11	METAL CHIP	1K	5%	1/10W
R804	1-216-821-11	METAL CHIP	1K	5%	1/10W
R805	1-216-809-11	METAL CHIP	100	5%	1/10W
R806	1-216-833-11	METAL CHIP	10K	5%	1/10W
R807	1-216-848-11	METAL CHIP	180K	5%	1/10W
R808	1-216-864-11	SHORT CHIP	0		
R809	1-216-837-11	METAL CHIP	22K	5%	1/10W
R810	1-216-797-11	METAL CHIP	10	5%	1/10W
R811	1-216-839-11	METAL CHIP	33K	5%	1/10W
		< RELAY >			
RY701	1-755-421-11	RELAY			
RY711	1-755-421-11	RELAY (EX8) (EX9/EX9T)			
		< TERMINAL BOARD >			
TB701	1-780-314-11	TERMINAL BOARD (4P) (SPEAKERS) (EX6)			
TB701	1-780-314-11	TERMINAL BOARD (4P) (SPEAKERS HIGH)(EX8)			
TB702	1-780-685-11	TERMINAL BOARD (4P) (SPEAKERS LOW)(EX8)			
		< VIBRATOR >			
X801	1-814-067-11	OSCILLATOR, CRYSTAL (32.768kHz)			

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Ref. No.	Part No.	Description			Remark
	Y-8287-109-A	PLACA PAINEL MONTADA (EX6)			
	Y-8287-153-A	PLACA PAINEL MONTADA (EX8)			
		**********			
	2-649-178-01	PLATE, LIGHT GUIDE			
	2-665-175-01	SHEET (REFLECTOR)			
		< CAPACITOR >			
C301	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C302	1-104-658-91	ELECT	100uF	20%	10V
C303	1-126-964-11	ELECT	10uF	20%	50V
C304	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C305	1-126-964-11	ELECT	10uF	20%	50V
C306	1-104-655-91	ELECT	470uF	20%	6.3V
C308	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C309	1-126-965-91	ELECT	22uF	20%	50V
C310	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C311	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C312	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C314	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C315	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C316	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C317	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C319	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C320	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C321	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C328	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C330	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C332	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C336	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C338	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C340	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C341	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C342	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C343	1-126-965-91	ELECT	22uF	20%	50V
C344	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C345	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C346	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C450	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C451	1-126-923-91	ELECT	220uF	20%	10V
C452	1-126-925-91	ELECT	470uF	20%	10V
C453	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C454	1-126-925-91	ELECT	470uF	20%	10V
C497	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C498	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
		< CONNECTOR >			
CN302	1-784-735-11	CONNECTOR, FFC 13P			
CN303	1-784-741-11	CONNECTOR, FFC 19P			
CN305	1-779-548-21	CONNECTOR, FFC (LIF (NON-ZIF)) 11P			
CN306	1-568-854-11	CONNECTOR, FFC 11P			
CN451	1-779-293-11	CONNECTOR, FFC (LIF (NON-ZIF)) 25P			

Ref. No.	Part No.	Description	Remark
		< DIODE >	
D301	6-501-722-01	DIODE MAZ8043GMLS0	
D302	6-501-817-01	DIODE MA2J1110GLS0	
D303	6-500-334-01	DIODE MC2836-T112-1	
D304	6-500-335-01	DIODE MC2838-T112-1	
D305	6-501-817-01	DIODE MA2J1110GLS0	
D306	6-503-056-01	LED 1L0341Y23E0CA602-II (LCD BACK LIGHT)	
D313	6-503-055-01	LED 1L434XA22E0DDT01 (VOLUME)	
D314	6-503-055-01	LED 1L434XA22E0DDT01 (VOLUME)	
D315	6-503-055-01	LED 1L434XA22E0DDT01 (VOLUME)	
D316	6-503-055-01	LED 1L434XA22E0DDT01 (VOLUME)	
D317	6-503-055-01	LED 1L434XA22E0DDT01 (VOLUME)	
D322	6-501-582-01	DIODE 1N4002-A2	
D400	6-501-582-01	DIODE 1N4002-A2	
D451	6-501-719-01	DIODE MAZ8039GHLS0	
D452	6-501-582-01	DIODE 1N4002-A2	
D453	6-501-582-01	DIODE 1N4002-A2	
		< IC >	
IC301	A-1768-191-A	IC MB90F831PF-G-SPE1 (for SERVICE)	
IC302	6-600-767-01	IC PNA4823M02S0 (IR)	
		< JUMPER RESISTOR >	
JR301	1-216-864-11	SHORT CHIP 0	
JR302	1-216-864-11	SHORT CHIP 0	
JR303	1-216-864-11	SHORT CHIP 0	
JR304	1-216-864-11	SHORT CHIP 0	
JR305	1-216-864-11	SHORT CHIP 0	
JR306	1-216-864-11	SHORT CHIP 0	
JR307	1-216-864-11	SHORT CHIP 0	
		< LIQUID CRYSTAL DISPLAY >	
LCD301	1-811-042-11	DISPLAY PANEL, LIQUID CRYSTAL	
		< TRANSISTOR >	
Q301	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q302	8-729-037-13	TRANSISTOR KTA1271Y	
Q303	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q304	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q305	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q306	8-729-038-28	TRANSISTOR RT1N441C-TP-1	
Q307	6-551-696-01	TRANSISTOR ISA1235AC1TP-1EF	
Q308	8-729-038-28	TRANSISTOR RT1N441C-TP-1	
Q309	8-729-040-76	TRANSISTOR KTA1273-Y-AT	
Q310	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q311	8-729-024-43	TRANSISTOR 2SA1365-T112-1EF	
Q312	8-729-024-43	TRANSISTOR 2SA1365-T112-1EF	
Q313	8-729-024-43	TRANSISTOR 2SA1365-T112-1EF	
Q314	8-729-024-43	TRANSISTOR 2SA1365-T112-1EF	
Q315	8-729-047-62	TRANSISTOR 2SC3440-T12-1F	
Q316	8-729-047-62	TRANSISTOR 2SC3440-T12-1F	
Q317	8-729-047-62	TRANSISTOR 2SC3440-T12-1F	
Q318	8-729-047-62	TRANSISTOR 2SC3440-T12-1F	
Q320	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q401	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q402	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q451	8-729-036-86	TRANSISTOR KTC3203Y-AT	
Q452	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
		< RESISTOR >	
R302	1-216-809-11	METAL CHIP 100 5% 1/10W	
R303	1-216-809-11	METAL CHIP 100 5% 1/10W	
R304	1-216-809-11	METAL CHIP 100 5% 1/10W	
R305	1-216-809-11	METAL CHIP 100 5% 1/10W	
R306	1-216-809-11	METAL CHIP 100 5% 1/10W	
R307	1-216-809-11	METAL CHIP 100 5% 1/10W	
R308	1-216-809-11	METAL CHIP 100 5% 1/10W	
R309	1-216-809-11	METAL CHIP 100 5% 1/10W	
R310	1-216-809-11	METAL CHIP 100 5% 1/10W	
R311	1-216-809-11	METAL CHIP 100 5% 1/10W	
R312	1-216-809-11	METAL CHIP 100 5% 1/10W	
R313	1-216-809-11	METAL CHIP 100 5% 1/10W	
R314	1-216-809-11	METAL CHIP 100 5% 1/10W	
R315	1-216-809-11	METAL CHIP 100 5% 1/10W	
R316	1-216-809-11	METAL CHIP 100 5% 1/10W	
R317	1-216-809-11	METAL CHIP 100 5% 1/10W	
R318	1-216-809-11	METAL CHIP 100 5% 1/10W	
R319	1-216-809-11	METAL CHIP 100 5% 1/10W	
R320	1-216-809-11	METAL CHIP 100 5% 1/10W	
R321	1-216-809-11	METAL CHIP 100 5% 1/10W	
R324	1-216-809-11	METAL CHIP 100 5% 1/10W	
R325	1-216-797-11	METAL CHIP 10 5% 1/10W	
R326	1-216-809-11	METAL CHIP 100 5% 1/10W	
R327	1-216-809-11	METAL CHIP 100 5% 1/10W	
R328	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R329	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
R330	1-216-819-11	METAL CHIP 680 5% 1/10W	
R331	1-216-845-11	METAL CHIP 100K 5% 1/10W	
R332	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R333	1-216-845-11	METAL CHIP 100K 5% 1/10W	
R334	1-216-827-11	METAL CHIP 3.3K 5% 1/10W	
R335	1-216-837-11	METAL CHIP 22K 5% 1/10W	
R336	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R337	1-216-813-11	METAL CHIP 220 5% 1/10W	
R338	1-216-789-11	METAL CHIP 2.2 5% 1/10W	
R339	1-216-789-11	METAL CHIP 2.2 5% 1/10W	
R340	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R341	1-216-839-11	METAL CHIP 33K 5% 1/10W	
R342	1-216-849-11	METAL CHIP 220K 5% 1/10W	
R343	1-216-853-11	METAL CHIP 470K 5% 1/10W	
R344	1-216-826-11	METAL CHIP 2.7K 5% 1/10W	
R345	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R346	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R347	1-216-817-11	METAL CHIP 470 5% 1/10W	
R348	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R349	1-216-817-11	METAL CHIP 470 5% 1/10W	
R350	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R351	1-216-817-11	METAL CHIP 470 5% 1/10W	
R352	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R353	1-216-817-11	METAL CHIP 470 5% 1/10W	
R354	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R355	1-216-818-11	METAL CHIP 560 5% 1/10W	
R356	1-216-818-11	METAL CHIP 560 5% 1/10W	
R357	1-216-841-11	METAL CHIP 47K 5% 1/10W	

PANEL

Ref. No.	Part No.	Description			Remark
R358	1-216-841-11	METAL CHIP	47K	5%	1/10W
R359	1-216-818-11	METAL CHIP	560	5%	1/10W
R360	1-216-818-11	METAL CHIP	560	5%	1/10W
R361	1-216-841-11	METAL CHIP	47K	5%	1/10W
R362	1-216-837-11	METAL CHIP	22K	5%	1/10W
R363	1-216-837-11	METAL CHIP	22K	5%	1/10W
R364	1-216-837-11	METAL CHIP	22K	5%	1/10W
R365	1-216-837-11	METAL CHIP	22K	5%	1/10W
R366	1-216-833-11	METAL CHIP	10K	5%	1/10W
R367	1-216-837-11	METAL CHIP	22K	5%	1/10W
R368	1-216-833-11	METAL CHIP	10K	5%	1/10W
R369	1-216-821-11	METAL CHIP	1K	5%	1/10W
R370	1-216-821-11	METAL CHIP	1K	5%	1/10W
R371	1-216-821-11	METAL CHIP	1K	5%	1/10W
R372	1-216-821-11	METAL CHIP	1K	5%	1/10W
R373	1-216-833-11	METAL CHIP	10K	5%	1/10W
R374	1-216-821-11	METAL CHIP	1K	5%	1/10W
R375	1-216-805-11	METAL CHIP	47	5%	1/10W
R376	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R377	1-216-809-11	METAL CHIP	100	5%	1/10W
R378	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R379	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R381	1-216-821-11	METAL CHIP	1K	5%	1/10W
R382	1-216-809-11	METAL CHIP	100	5%	1/10W
R383	1-216-809-11	METAL CHIP	100	5%	1/10W
R384	1-216-839-11	METAL CHIP	33K	5%	1/10W
R389	1-216-841-11	METAL CHIP	47K	5%	1/10W(EX6)
R389	1-216-845-11	METAL CHIP	100K	5%	1/10W(EX8)
R390	1-216-833-11	METAL CHIP	10K	5%	1/10W
R391	1-216-832-91	METAL CHIP	82K	5%	1/10W
R392	1-216-833-11	METAL CHIP	10K	5%	1/10W
R393	1-216-841-11	METAL CHIP	47K	5%	1/10W
R394	1-216-845-11	METAL CHIP	100K	5%	1/10W
R396	1-216-851-11	METAL CHIP	330K	5%	1/10W
R400	1-216-821-11	METAL CHIP	1K	5%	1/10W
R401	1-216-821-11	METAL CHIP	1K	5%	1/10W
R402	1-216-845-11	METAL CHIP	100K	5%	1/10W
R419	1-216-838-11	METAL CHIP	27K	5%	1/10W
R420	1-216-845-11	METAL CHIP	100K	5%	1/10W
R421	1-216-833-11	METAL CHIP	10K	5%	1/10W
R422	1-216-809-11	METAL CHIP	100	5%	1/10W
R423	1-216-807-11	METAL CHIP	68	5%	1/10W
R424	1-216-809-11	METAL CHIP	100	5%	1/10W
R425	1-216-807-11	METAL CHIP	68	5%	1/10W
R426	1-216-809-11	METAL CHIP	100	5%	1/10W
R427	1-216-809-11	METAL CHIP	100	5%	1/10W
R428	1-216-807-11	METAL CHIP	68	5%	1/10W
R429	1-216-845-11	METAL CHIP	100K	5%	1/10W
R430	1-216-845-11	METAL CHIP	100K	5%	1/10W
R431	1-216-837-11	METAL CHIP	22K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R432	1-216-833-11	METAL CHIP	10K	5%	1/10W
R434	1-216-809-11	METAL CHIP	100	5%	1/10W
R435	1-216-839-11	METAL CHIP	33K	5%	1/10W
R436	1-216-833-11	METAL CHIP	10K	5%	1/10W
R440	1-216-821-11	METAL CHIP	1K	5%	1/10W
R441	1-216-809-11	METAL CHIP	100	5%	1/10W
R442	1-216-813-11	METAL CHIP	220	5%	1/10W
R443	1-216-817-11	METAL CHIP	470	5%	1/10W
R444	1-216-809-11	METAL CHIP	100	5%	1/10W
R449	1-216-864-11	SHORT CHIP	0		
R450	1-216-833-11	METAL CHIP	10K	5%	1/10W
R451	1-216-809-11	METAL CHIP	100	5%	1/10W
R452	1-216-837-11	METAL CHIP	22K	5%	1/10W
R453	1-216-821-11	METAL CHIP	1K	5%	1/10W
R454	1-249-403-11	CARBON	68	5%	1/4W
R455	1-249-403-11	CARBON	68	5%	1/4W
R456	1-249-403-11	CARBON	68	5%	1/4W
R458	1-216-864-11	SHORT CHIP	0		
R459	1-216-864-11	SHORT CHIP	0		
R460	1-216-864-11	SHORT CHIP	0		
R461	1-216-864-11	SHORT CHIP	0		
R462	1-216-864-11	SHORT CHIP	0		
R463	1-216-864-11	SHORT CHIP	0		
R464	1-216-864-11	SHORT CHIP	0		
R465	1-216-864-11	SHORT CHIP	0		
R466	1-216-864-11	SHORT CHIP	0		
R470	1-216-833-11	METAL CHIP	10K	5%	1/10W
R471	1-216-821-11	METAL CHIP	1K	5%	1/10W
R472	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R473	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R474	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R475	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R476	1-216-828-11	METAL CHIP	3.9K	5%	1/10W
R477	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R478	1-216-835-11	METAL CHIP	15K	5%	1/10W
R480	1-216-833-11	METAL CHIP	10K	5%	1/10W
R481	1-216-821-11	METAL CHIP	1K	5%	1/10W
R482	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R483	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R484	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R485	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R486	1-216-828-11	METAL CHIP	3.9K	5%	1/10W
R487	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R488	1-216-835-11	METAL CHIP	15K	5%	1/10W
R489	1-216-841-11	METAL CHIP	47K	5%	1/10W
R490	1-216-833-11	METAL CHIP	10K	5%	1/10W
R491	1-216-821-11	METAL CHIP	1K	5%	1/10W
R492	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R493	1-216-843-11	METAL CHIP	68K	5%	1/10W
R494	1-216-839-11	METAL CHIP	33K	5%	1/10W
R495	1-216-833-11	METAL CHIP	10K	5%	1/10W
R496	1-216-833-11	METAL CHIP	10K	5%	1/10W
R497	1-216-817-11	METAL CHIP	470	5%	1/10W
R498	1-216-821-11	METAL CHIP	1K	5%	1/10W
		< ROTARY ENCODER >			
S491	1-786-417-11	ENCODER, ROTARY (VOLUME)			
		< SWITCH >			
SW471	1-771-874-11	SWITCH, TACTILE (FUNCTION)			

Ref. No.	Part No.	Description	Remark
SW472	1-771-874-11	SWITCH, TACTILE (EQ)	
SW473	1-771-874-11	SWITCH, TACTILE (OPTIONS)	
SW474	1-771-874-11	SWITCH, TACTILE (DSGX)	
SW475	1-771-874-11	SWITCH, TACTILE (►❚❚)	
SW476	1-771-874-11	SWITCH, TACTILE (– TUNING ⏮ ◀◀)	
SW477	1-771-874-11	SWITCH, TACTILE (DISC SKIP/EX-CHANGE)	
SW478	1-771-874-11	SWITCH, TACTILE (⏏)	
SW481	1-771-874-11	SWITCH, TACTILE (■)	
SW482	1-771-874-11	SWITCH, TACTILE (TUNING + ►► ▷▷⏭)	
SW483	1-771-874-11	SWITCH, TACTILE (REC TO USB)	
SW484	1-771-874-11	SWITCH, TACTILE (ENTER)	
SW485	1-771-874-11	SWITCH, TACTILE (DISC 1)	
SW486	1-771-874-11	SWITCH, TACTILE (DISC 2)	
SW487	1-771-874-11	SWITCH, TACTILE (DISC 3)	
SW488	1-771-874-11	SWITCH, TACTILE (USB)	
SW489	1-771-874-11	SWITCH, TACTILE (CD)	
SW491	1-771-874-11	SWITCH, TACTILE (I/⏻)	
SW492	1-771-874-11	SWITCH, TACTILE (DISPLAY)	
		< VIBRATOR >	
X301	1-814-067-11	OSCILLATOR, CRYSTAL (32.768kHz)	
X302	1-813-548-31	VIBRATOR, CERAMIC (6MHz)	

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PLACA PT-POWER
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< CAPACITOR >

C001	1-165-621-91	CERAMIC CHIP	0.1uF		50V
C005	1-126-962-11	ELECT	3.3uF	20%	50V
C006	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C010	1-126-942-61	ELECT	1000uF	20%	25V
C011	1-130-777-00	MYLAR	0.1uF	5%	100V(EX8)
C011	1-136-165-00	FILM	0.1uF	5%	50V(EX6)
C012	1-130-777-00	MYLAR	0.1uF	5%	100V(EX8)
C012	1-136-165-00	FILM	0.1uF	5%	50V(EX6)
C013	1-126-974-11	ELECT	3300uF	20%	50V(EX8)
C013	1-128-550-11	ELECT	2200uF	20%	50V(EX6)
C014	1-126-974-11	ELECT	3300uF	20%	50V(EX8)
C014	1-128-550-11	ELECT	2200uF	20%	50V(EX6)
C017	1-126-943-11	ELECT	2200uF	20%	25V
C018	1-126-963-11	ELECT	4.7uF	20%	50V
C019	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C020	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C021	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C022	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C023	1-104-658-91	ELECT	100uF	20%	10V
C050	1-126-964-11	ELECT	10uF	20%	50V
C051	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C053	1-126-935-11	ELECT	470uF	20%	16V
C054	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C055	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C056	1-126-916-11	ELECT	1000uF	20%	6.3V
C070	1-164-156-11	CERAMIC CHIP	0.1uF		25V

< CONNECTOR >

* CN001	1-793-660-11	PIN, CONNECTOR (PC BOARD) 3P	
CN011	1-568-830-11	CONNECTOR, FFC 11P	
CN012	1-819-138-11	PIN, CONNECTOR 10P	

< DIODE >

D001	6-500-334-01	DIODE MC2836-T112-1
D002	6-500-335-01	DIODE MC2838-T112-1
D003	6-500-335-01	DIODE MC2838-T112-1
D011	6-502-619-01	DIODE 1N5402-C532-2
D012	6-502-619-01	DIODE 1N5402-C532-2
D013	6-502-619-01	DIODE 1N5402-C532-2
D014	6-502-619-01	DIODE 1N5402-C532-2
D015	6-501-582-01	DIODE 1N4002-A2
D016	6-501-582-01	DIODE 1N4002-A2
D017	6-501-582-01	DIODE 1N4002-A2 (EX8)
D018	6-501-582-01	DIODE 1N4002-A2 (EX8)
D019	6-500-335-01	DIODE MC2838-T112-1
D020	6-500-334-01	DIODE MC2836-T112-1
D021	6-501-817-01	DIODE MA2J1110GLS0
D022	6-501-817-01	DIODE MA2J1110GLS0
D023	6-500-335-01	DIODE MC2838-T112-1
D024	6-501-817-01	DIODE MA2J1110GLS0
D050	6-502-161-01	DIODE RB055L-40TE25

< IC >

IC050	6-600-113-01	IC NJM2368V(TE2)

< COIL >

L050	1-456-467-11	COIL, CHOKE	100uH

< TRANSFORMER >

⚠ PT001	1-445-105-11	TRANSFORMER, POWER (SUB)	

< TRANSISTOR >

Q001	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q011	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q012	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q013	6-551-696-01	TRANSISTOR ISA1235AC1TP-1EF
Q050	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q051	8-729-040-76	TRANSISTOR KTA1273-Y-AT
Q052	8-729-040-76	TRANSISTOR KTA1273-Y-AT
Q053	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q054	6-551-696-01	TRANSISTOR ISA1235AC1TP-1EF

< RESISTOR >

R001	1-216-842-11	METAL CHIP	56K	5%	1/10W
R002	1-216-838-11	METAL CHIP	27K	5%	1/10W
R003	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R004	1-216-821-11	METAL CHIP	1K	5%	1/10W
R005	1-216-821-11	METAL CHIP	1K	5%	1/10W
R006	1-216-833-11	METAL CHIP	10K	5%	1/10W
R009	1-216-864-11	SHORT CHIP	0		
R013	1-216-839-11	METAL CHIP	33K	5%	1/10W

PT-POWER **REG** **USB**

Ref. No.	Part No.	Description			Remark
R014	1-216-828-11	METAL CHIP	3.9K	5%	1/10W(EX6)
R014	1-216-833-11	METAL CHIP	10K	5%	1/10W(EX8)
R015	1-216-839-11	METAL CHIP	33K	5%	1/10W
R016	1-216-828-11	METAL CHIP	3.9K	5%	1/10W(EX6)
R016	1-216-833-11	METAL CHIP	10K	5%	1/10W(EX8)
R017	1-216-833-11	METAL CHIP	10K	5%	1/10W
R018	1-216-833-11	METAL CHIP	10K	5%	1/10W
R019	1-216-833-11	METAL CHIP	10K	5%	1/10W
R020	1-216-833-11	METAL CHIP	10K	5%	1/10W
R021	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R022	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R023	1-216-809-11	METAL CHIP	100	5%	1/10W
R024	1-216-809-11	METAL CHIP	100	5%	1/10W
R025	1-216-833-11	METAL CHIP	10K	5%	1/10W
R026	1-216-833-11	METAL CHIP	10K	5%	1/10W
R027	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R028	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R029	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R030	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R031	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R032	1-216-841-11	METAL CHIP	47K	5%	1/10W
R033	1-216-845-11	METAL CHIP	100K	5%	1/10W
R034	1-216-849-11	METAL CHIP	220K	5%	1/10W
R035	1-216-833-11	METAL CHIP	10K	5%	1/10W
R036	1-216-833-11	METAL CHIP	10K	5%	1/10W
R037	1-216-841-11	METAL CHIP	47K	5%	1/10W
R038	1-216-837-11	METAL CHIP	22K	5%	1/10W
R039	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R050	1-216-833-11	METAL CHIP	10K	5%	1/10W
R051	1-216-848-11	METAL CHIP	180K	5%	1/10W
R052	1-216-851-11	METAL CHIP	330K	5%	1/10W
R053	1-216-841-11	METAL CHIP	47K	5%	1/10W
R054	1-216-833-11	METAL CHIP	10K	5%	1/10W
R055	1-216-845-11	METAL CHIP	100K	5%	1/10W
R057	1-216-817-11	METAL CHIP	470	5%	1/10W
R058	1-216-817-11	METAL CHIP	470	5%	1/10W
R059	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R060	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R061	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R062	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R063	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R064	1-216-818-11	METAL CHIP	560	5%	1/10W
R066	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R067	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R068	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R069	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R070	1-216-791-11	METAL CHIP	3.3	5%	1/10W
R071	1-216-845-11	METAL CHIP	100K	5%	1/10W
R072	1-216-833-11	METAL CHIP	10K	5%	1/10W
R073	1-216-833-11	METAL CHIP	10K	5%	1/10W
R074	1-216-843-11	METAL CHIP	68K	5%	1/10W
R075	1-216-821-11	METAL CHIP	1K	5%	1/10W
R076	1-216-817-11	METAL CHIP	470	5%	1/10W
R077	1-216-817-11	METAL CHIP	470	5%	1/10W
		< RELAY >			

Ref. No.	Part No.	Description			Remark
⚠ RY002	1-755-496-11	RELAY			
		< VOLTAGE SELECTOR >			
⚠ S001	1-786-408-11	SELECTOR, VOLTAGE (SWS-2301) (VOLTAGE SELECTOR)			
**********					
		PLACA REG			
		**********			
		< CAPACITOR >			
C697	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C698	1-164-156-11	CERAMIC CHIP	0.1uF		25V
		< IC >			
IC690	6-713-032-01	IC KIA7809API-U/PF			
**********					
		PLACA USB			
		**********			
		< CAPACITOR >			
C900	1-117-681-11	ELECT CHIP	100uF	20%	16V
C901	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C902	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C903	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C904	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C905	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C906	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C907	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C908	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C909	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C915	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C916	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C917	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C918	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C919	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C920	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C921	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C950	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C951	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C952	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C953	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C954	1-126-601-11	ELECT CHIP	2.2uF	20%	50V
C955	1-165-884-11	CERAMIC CHIP	2.2uF	10%	6.3V
		< CONNECTOR >			
CN901	1-784-382-51	CONNECTOR, FFC/FPC 25P			
CN902	1-784-382-51	CONNECTOR, FFC/FPC 25P			
CN903	1-764-250-11	PIN, CONNECTOR (PC BOARD) 4P			
CN910	1-784-366-51	CONNECTOR, FFC/FPC 7P			
		< IC >			
IC901	A-1768-193-A	IC LC87F1JJ2AU-SQFP-H (for SERVICE)			
		< RESISTOR >			
R900	1-216-864-11	SHORT CHIP	0		
R901	1-216-809-11	METAL CHIP	100	5%	1/10W
R902	1-216-809-11	METAL CHIP	100	5%	1/10W
R903	1-216-857-11	METAL CHIP	1M	5%	1/10W
R904	1-216-864-11	SHORT CHIP	0		

Ref. No.	Part No.	Description			Remark
R905	1-216-809-11	METAL CHIP	100	5%	1/10W
R906	1-216-809-11	METAL CHIP	100	5%	1/10W
R907	1-216-809-11	METAL CHIP	100	5%	1/10W
R908	1-216-809-11	METAL CHIP	100	5%	1/10W
R909	1-216-809-11	METAL CHIP	100	5%	1/10W
R910	1-216-845-11	METAL CHIP	100K	5%	1/10W
R911	1-216-809-11	METAL CHIP	100	5%	1/10W
R912	1-216-845-11	METAL CHIP	100K	5%	1/10W
R913	1-216-809-11	METAL CHIP	100	5%	1/10W
R914	1-216-845-11	METAL CHIP	100K	5%	1/10W
R915	1-216-809-11	METAL CHIP	100	5%	1/10W
R916	1-216-809-11	METAL CHIP	100	5%	1/10W
R917	1-216-809-11	METAL CHIP	100	5%	1/10W
R918	1-216-805-11	METAL CHIP	47	5%	1/10W
R919	1-216-805-11	METAL CHIP	47	5%	1/10W
R920	1-216-805-11	METAL CHIP	47	5%	1/10W
R921	1-216-809-11	METAL CHIP	100	5%	1/10W
R922	1-216-809-11	METAL CHIP	100	5%	1/10W
R923	1-216-809-11	METAL CHIP	100	5%	1/10W
R924	1-216-809-11	METAL CHIP	100	5%	1/10W
R951	1-216-835-11	METAL CHIP	15K	5%	1/10W
R952	1-216-835-11	METAL CHIP	15K	5%	1/10W
R953	1-216-803-11	METAL CHIP	33	5%	1/10W
R954	1-216-803-11	METAL CHIP	33	5%	1/10W
R955	1-216-864-11	SHORT CHIP	0		
		< VIBRATOR >			
X901	1-814-365-11	QUARTZ CRYSTAL UNITS (12MHz)			
**********					
		PLACA USB-JACK			
		**********			
		< CAPACITOR >			
C550	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C551	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C552	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C561	1-126-923-91	ELECT	220uF	20%	10V
C565	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
		< CONNECTOR >			
CN551	1-784-770-11	CONNECTOR, FFC 9P			
CN560	1-794-548-21	CONNECTOR, USB (A) 4P (USB)			
		< DIODE >			
D551	6-500-848-01	DIODE MC2840-T112-1			
		< JUMPER RESISTOR >			
FB561	1-216-295-91	SHORT CHIP	0		
FB562	1-216-295-91	SHORT CHIP	0		
		< JACK >			
J551	1-815-629-21	JACK (PHONES)			
J552	1-566-822-51	JACK (PC IN)			
		< RESISTOR >			
R550	1-216-864-11	SHORT CHIP	0		
R551	1-216-837-11	METAL CHIP	22K	5%	1/10W
R552	1-216-837-11	METAL CHIP	22K	5%	1/10W
R561	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R562	1-216-789-11	METAL CHIP	2.2	5%	1/10W
**********					

Ref. No.	Part No.	Description	Remark
		DIVERSOS	
		*********	
52	1-832-817-21	CABO FLAT FLEXIVEL (9 VIAS)	
65	1-832-634-21	CABO FLAT FLEXIVEL (25 VIAS)	
66	1-838-042-21	CABO FLAT FLEXIVEL (19 VIAS)	
67	1-831-928-21	CABO FLAT FLEXIVEL (11 VIAS)	
151	1-838-040-21	CABO FLAT FLEXIVEL (25 VIAS)	
152	1-832-837-21	CABO FLAT FLEXIVEL (13 VIAS)	
⚠ 156	1-835-706-21	CABO DE FORÇA	
251	1-840-387-11	MECANISMO DO CD	
256	1-834-268-21	CABO TIPO FLAT (16 VIAS)	
⚠ 259	A-1780-028-A	UNIDADE ÓTICA (DA11MMVGP)	
FAN901	1-787-344-11	VENTILADOR	
⚠ PT004	1-445-868-11	TRANSFORMADOR DE FORÇA (MAIN)	(EX6)
⚠ PT005	1-445-869-11	TRANSFORMADOR DE FORÇA (MAIN)	(EX8)
S001	1-771-853-11	CHAVE LIMITE	

SS-EC69/EC79

MANUAL DE SERVIÇO

Ver. 1.0 07.2010

SS-EC79

SS-EC69

- SS-EC69 é a caixa acústica do MHC-EX6
- SS-EC79 é a caixa acústica do MHC-EX8

ESPECIFICAÇÕES

SS-EC79 para MHC-EX8

Speaker system:
3-way 3-driver speaker system, Bass reflex
Speaker unit:
Subwoofer: 130 mm, cone type
Woofer: 130 mm, cone type
Tweeter: 40 mm, horn type
Rated impedance:
HIGH: 8 Ω
LOW: 8 Ω
Dimensions (W/H/D):
Approx. 221 mm × 350 mm × 215 mm
Mass: Approx. 3.4 kg

SS-EC69 para MHC-EX6

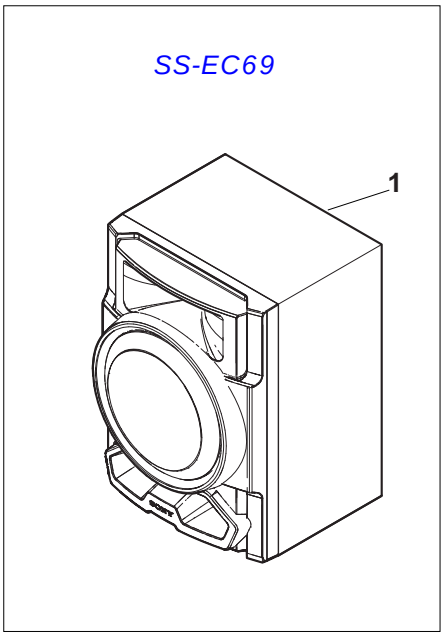
Sistema de alto-falante:
2-vias 2-unidades, Bass reflex
Unidades de alto-falantes:
Woofer: 16 cm, tipo cone
Tweeter: 4 cm, tipo corneta
Impedância nominal: 6 Ω
Dimensions (W/H/D):
Approx. 221 mm × 306 mm × 215 mm
Mass: Approx. 2.8 kg

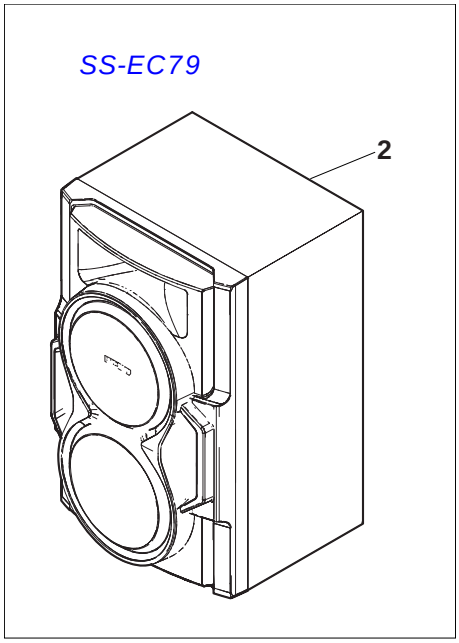
Design and specifications are subject to change without notice.

CAIXA ACÚSTICA

SONY®

1. VISTA EXPLODIDA





Ref. No.	Part No.	Description	Remark
1	Y-8286-899-A	CAIXA ACÚSTICA MONTADA **(SS-EC69)**	
2	Y-8287-139-A	CAIXA ACÚSTICA MONTADA **(SS-EC79)**	

Nota: No caso de defeito, substituir por Caixa Acústica completo.
Para este modelo não será fornecido no nível de componente.

SONY BRASIL LTDA.
Product & Quality Division
Julho / 2010

http://www.sony.com.br